

# The Mining Journal.

## RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

[The Mining Journal is Registered at the General Post Office as a Newspaper and for Transmission Abroad.]

No. 2347.—Vol. L.

LONDON, SATURDAY, AUGUST 14, 1880.

WITH SUPPLEMENT. PRICE SIXPENCE. PER ANNUM, BY POST, £1 4s.

**JAMES H. CROFTS, STOCK AND SHARE BROKER, AND MINING SHARE DEALER.**  
No. 1, FINCH LANE, CORNHILL, LONDON, E.C.  
ESTABLISHED 1842.

Business transacted in all descriptions of MINING Stocks and Shares (and Foreign), Consols, Banks, Bonds (Foreign and Colonial), Railways, Insurance, Assurance, Telegraph, Tramway, Shipping, Canal, Gas, and Dock Shares, and all Miscellaneous Shares.

Business negotiated in Stocks and Shares not having a general market every Friday a general and reliable List issued (a copy of which will be forwarded regularly on application), containing prices of the week.

**MINES INSPECTED.**  
CITY BANK, LONDON.—SOUTH CORNWALL BANK, ST. AUSTELL.

AL DEALINGS in the following, or part:—  
30 Hingston Down, 18s 9  
100 Javali, 4s. 9d.  
35 Ruby, £7 15s.  
15 Killfret, 5s.  
20 Leadhills, £3 5s.  
15 Roman Gravel, £10 10s.  
20 Mark Valley, £2 3s 9  
100 S. Indian Gold, £1 17 6  
20 N. Penstruthal, 11s.  
20 Santa Barbara, £1 18 9  
10 So. Condurow, 10s.  
50 N. Herodsfoot, 8s. 9d.  
50 South Darren, £2 10s.  
50 Pandora, 18s.  
25 So. E. Wynad, £1 7 6  
25 Port Nigel, 5s.  
50 S. Penstruthal, 11s. 3d  
50 Tankerville, £3.  
25 Prince of Wales, £1 2 6  
50 West Phoenix, £2 2 6  
75 Parys Copper, £1 5s.  
15 Wheel Crebor, £5.

**RAILWAYS—SPECIAL BUSINESS.**  
**FOREIGN BONDS—SPECIAL BUSINESS.**  
Fortnightly accounts opened on receipt of the usual cover.

**JAMES H. CROFTS, 1, FINCH LANE, LONDON.**  
ESTABLISHED 1842.

**W. H. BUMPUS, STOCK AND SHARE BROKER, AND MINING SHARE DEALER.**  
44, THREADNEEDLE STREET, LONDON, E.C.  
ESTABLISHED 1867.

Business transacted in STOCK EXCHANGE SECURITIES and MISCELLANEOUS SHARES of every description. RAILWAYS, BANKS, FOREIGN and COLONIAL BONDS. RAILWAYS, TELEGRAPHS, and all the LEADING INVESTMENTS. Accounts opened for the Fortnightly Settlement. A List of Investments free on application.

**BUMPUS HAS SPECIAL BUSINESS in the undermentioned:—**  
50 Frontino, £3 8s. 9d.  
40 Port Nigel, 26s.  
15 Frongoch, 25s.  
20 Gunnislake, £4 10s.  
5 Great Laxey, £19 10s.  
100 Port Phillip, 8s. 3d.  
100 Glenroy, 16s. 6d.  
40 Ruby, £7 10s.  
15 Rio Tinto, £13 10s.  
20 Richmond, £15 10s.  
20 Roman Gravel, £10 10s.  
70 So. East Wynad, 28s. 3  
100 South Indian, 36s. 6d.  
5 Tincroft, £18 10s.  
5 Van, £19.  
100 Wheel Jewell, 15s.  
50 West Pateley Bridge, £3 10s.  
25 Wheel Sisters, £3 10s.  
20 Wh. Grenville, 3s.  
3 West Seton, £22 10s.  
40 West Kitty, 40s.

**AL BUSINESS, at close prices, in the SHARES of all the principal HOME and FOREIGN MINES.**

BUMPUS devotes special attention to these Securities, and is in a position to furnish reliable information and advice to intending investors and others.

**WHEEL GRENVILLE.** WEST PEEVOR.  
**WHEEL PEEVOR.** NEW PEEVOR.

**WILLIAM HENRY BUMPUS, SWORN BROKER.**  
OFFICES: 44, THREADNEEDLE STREET, LONDON, E.C.  
ESTABLISHED 1867.

**DINAND R. KIRK, 5, BIRCHIN LANE, LONDON, E.C.**

Fortnightly ACCOUNTS opened, on receipt of the usual "cover," in Home and Foreign, Mining Shares, Foreign Bonds, and certain Miscellaneous Securities.

**WEEKLY**—A SEPARATE EDITION from that which appears in the Journal is published every Wednesday evening, containing "Notes and the Stock Markets," with Closing Prices. May be had on application. BANKERS: LONDON AND WESTMINSTER, Lothbury.

**E. J. BARTLETT, BRITISH AND FOREIGN STOCK AND SHARE DEALER, No. 30, GREAT ST. HELEN'S, LONDON, E.C.**

Business transacted in every species of Stock Exchange and Securities.

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GRACECHURCH STREET, LONDON, E.C. (Established 25 years).

ALL BUSINESS TRANSACTED FREE OF ANY CHARGE FOR COMMISSION.

Notice to Investors and Speculators.

AL DEALINGS in the following, or part:—  
40 Frongoch, 90 New Kitty.  
50 Flagstaff, 50 Port Penstruthal.  
100 Gold Const., 50 Port Nigel.  
50 Gawn, 70 Prince of Wales.  
20 Grogwinion, 80 South D'Eresby.  
50 Glenroy, 100 South Penstruthal.  
20 Glenrock, 70 South Devon.  
35 Hingston Down, 50 West Caradon.  
30 Herodsfoot, 75 Wheel Jewell.  
Caradon, 50 Lady Bertha.  
Lovell, 20 Levant.  
Crebor, 60 North D'Eresby.  
50 New Wye Valley, 50 West Phoenix.  
50 West Phoenix, 50 Wheel Sisters.

AL BUSINESS in Wheel Coates United. These shares should be at once as an investment. The sale of tin ore on August 4 for four working was over 5 tons, realising £274 10s. 4d.

### STOCK AND SHARE MARKETS.

Prices of STOCKS and SHARES in RAILWAYS, BANKS, ENGLISH and FOREIGN GOVERNMENT SECURITIES, GAS, MINES, INSURANCE, and other Stock Exchange Securities, and various important information forwarded on application to—

**MESSRS. PETER WATSON AND CO.,**  
18, AUSTIN FRIARS,  
OLD BROAD STREET, LONDON, E.C.  
BUYER and SELLER of SHARES at the close Market Price of the day.  
BANKERS: THE ALLIANCE BANK (Limited).

**MESSRS. PETER WATSON AND CO.'S**  
BRITISH AND FOREIGN MONTHLY MINING NEWS  
—STOCK AND SHARE INVESTMENT NOTES—MINES,  
MINERALS, AND METAL MARKETS—SHARE LIST,  
No. 821, Vol. XV., for AUGUST month, will shortly be ready,  
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Over 13 years at the above offices, adjoining the Stock Exchange and Mining Markets, with which they are now in DIRECT TELEGRAPHIC COMMUNICATION.

Mining shares currently dealt in are bought and sold at closest possible prices.

Large profits have been made on recommendations in the INVESTOR'S GAZETTE and INVESTMENT NOTES in the MINING JOURNAL.

DAILY LIST OF PRICES ISSUED TO CLIENTS.

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76, OLD BROAD STREET, LONDON.  
ESTABLISHED 1853.

**MR. JAMES STOCKER, STOCKBROKER,**  
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Business transacted at net prices, and with great dispatch, in BANKS, RAILWAYS, FOREIGN BONDS, BRITISH and FOREIGN MINES, and all other Securities, especially those not generally quoted on the markets.

Mr. REYNOLDS directs the attention of his correspondents to the accuracy of his anticipations respecting the Tin Market, and believes that a permanent improvement has set in, and that higher prices will be reached.

Mr. REYNOLDS considers a great rise in many of the principal Tin Mines as inevitable, and is himself prepared to buy largely for his correspondents.

Business transacted and references exchanged, when satisfactory, in any part of Great Britain.

See Mr. REYNOLDS's remarks on page 916.

**NOTICE OF REMOVAL.**

**GRANVILLE SHARP,**  
TO  
32, QUEEN VICTORIA STREET, LONDON, E.C.

**MR. EDWARD ASHMEAD, 2, DRAPER'S GARDENS,**  
LONDON, E.C.

MINING SECRETARY, AUDITOR, AND ACCOUNTANT.

**MESSRS. ENDEAN AND CO., STOCK AND SHARE DEALERS,**  
85, GRACECHURCH STREET, LONDON, E.C.

ESTABLISHED 1861.  
BANKERS: LONDON AND WESTMINSTER, Lothbury; and BARCLAY, BEVAN, and CO., Lombard-street, E.C.

**PENNINGTON AND CO., SWORN BROKERS,**  
3, ROYAL EXCHANGE BUILDINGS, E.C.

Transact business in every description of Stocks and Shares.

ESTABLISHED 1869.—BANKERS: ALLIANCE.

**TREVINCE CONSOLS.**—These shares have had a rise during the week, and will undoubtedly go much higher. We strongly advise their immediate purchase at 15s.

**SPECIAL BUSINESS in New Cathedral, Gold Coast, New Gold Run Ten per Cent. Preference, ditto Ordinary, and Devonport and Tiverton Brewery shares.**

**MR. CHARLES J. SIMS,**  
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Deals in all descriptions of STOCKS and SHARES at close market prices, and is always in a position to do business in SANTA BARBARA, PITANGUI, and BRAZILIAN GOLD MINES.

**MESSRS. THOMSON AND CO.,**  
STOCK AND SHARE DEALERS,  
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BANKERS: ROYAL EXCHANGE.

Business transacted in every description of Stocks and Shares.

**TREVINCE CONSOLS.**—These shares should be bought at once. Nothing like the discovery made at this mine has taken place in Gwennap for years past. The opinion in the locality is that it will be a great success before many months are over.

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50 Almada, 8s. 9d.  
25 Bedford Unit., 23s. 6d.  
25 Birdseye, 20s.  
25 Cambrian, 30s.  
50 Canada Cop., £1 13s.  
20 Carnarvon, 16s. 9d.  
25 Colorado, £2 7s. 6d.  
50 Consolidated, 11s. 6d.  
20 Devon Consols, £13 10s.  
50 Don Pedro, 8s. 3d.  
25 East Caradon, 13s. 9d.  
50 East Van, £2 10s.  
50 Flagstaff, 12s. 6d.

75 Port Phillip, 8s. 6d.  
50 Pestarena, 5s.  
20 Ruby Silver, £7 10s.  
10 Roman Gravel, £10 10s.  
20 So. E. Wynad, £2 10s.  
20 S. Indian Gold, £1 15s.  
20 Tankerville, £3 8s. 9d.  
100 Van & Glyn United, 12s. 6d.  
5 Van, £19.  
25 Victoria (London), 25s.  
25 West Caradon, £2 2s 6  
15 W. Chiverton, 16s. 3d  
10 Wheel Crebor, £5.

WEST LISBURN MINES strongly recommended.

Particulars on application.

**MR. CHARLES THOMAS,**  
MINING AGENT, STOCK AND SHARE DEALER,  
3, GREAT ST. HELEN'S, LONDON, E.C.

**MR. ALFRED THOMAS,**  
MINING AGENT, AND STOCK AND SHARE DEALER,  
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PER ANNUM ON PRESENT OUTLAY.

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Indian, American Stocks. British, Foreign, Colonial Mines.  
Bank, Financial Shares. Tea, Land Shares.  
Tramway, Telegraph Shares. Shipping, Dock Shares.  
Municipal Bonds. Miscellaneous Shares, &c., &c.

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**MR. SAMUEL JAMES, STOCK AND MINING**  
SHARE DEALER,

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Mr. JAMES begs to inform his friends and the investing public that he has REMOVED from REDRUTH, and COMMENCED BUSINESS at the ABOVE ADDRESS.

Mr. JAMES's long connection with the Mining Market in conjunction with his father, Capt. A. T. James, places him in an unusually good position for executing orders in this department to the greatest possible advantage of his clients.

MINES INSPECTED AND REPORTED UPON.

**MR. JOHN RISLEY, STOCK AND SHARE BROKER,**  
38, CORNHILL, LONDON, E.C.

WEST CARADON MINE strongly recommended. The adjoining mine, New West Caradon, in 6000 shares, is to be offered to the West Caradon Company without any premium. A call of 2s. 6d. per share is considered will be ample capital to open the mine. This property was only partially worked in 1872, and had a market value of over £40,000. The transfer will be completed this month, when a meeting will be convened, and the shares allotted *pro rata*.

**MR. W. B. COBB, STOCK AND SHARE DEALER,**  
29, BISHOPSGATE STREET, LONDON, E.C.

Business transacted in every description of Stocks and Shares. Fortnightly accounts opened on receipt of usual cover.

BANKERS: ALLIANCE BANK (Limited).

**MR. T. P. THOMAS, MINING AGENT, AND STOCK AND**  
SHARE DEALER,

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Advice given, founded on Forty Years' practical Mining Experience, and shares supplied at the net market prices of the day.

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30 Carn Brea, £7 10s.  
25 Cambrian, 27s. 6d.  
5 Cook's Kitchen, £9 7 6  
50 Consolidated, 11s.  
25 Chontales, 7s. 6d.  
2 Dolcoath, £55.  
5 Devon Consols, £13.  
25 Don Pedro, 8s.  
20 East Orebor, 20s.  
10 East Lovell, 27s. 6d.  
10 East Caradon, 32s. 6d.

50 E. Devon Con., £2 2 6  
25 East Van, £1 17s. 6d.  
25 Flagstaff, 11s. 3d.  
10 Glenroy, 15s.  
10 Gunnislake, 4s.  
25 Hingston Down, 18s 6  
50 Herodsfoot, £3 12s. 6d  
100 Killfret, 5s.  
20 Lady Bertha, 15s.  
25 Lady Ashburton, 22s 6  
20 No. Penstruthal, 28s 9  
50 North D'Eresby, 20s.

50 North Herodsfoot.  
25 Port Nigel, £1 15s.  
20 Prince of Wales, 22s.  
25 Polrose, £1 15s.  
30 So. Penstruthal, 11s.  
5 South Frances, £11.  
50 Trevinice Con., 12s. 6d  
10 Tincroft, £17 10s.  
10 West Vor, £2.  
25 Wh. Jewell, 14s. 6d.  
20 Wh. Crebor, £4 15s.  
100 W. Caradon, £2 10s.

**NORTH D'ERESBY MOUNTAIN LEAD COMPANY**  
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We recommend the PURCHASE OF THESE SHARES FOR INVESTMENT. The mine is opening well. See agents' reports in this day's papers.

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SOUTH WHEAL CREBOR (LIMITED).

NORTH D'ERESBY.

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PATENTEES OF SAFETY FUSE, having been in-  
formed that the name of their firm has been attached to  
fuse not of their manufacture, beg to call the attention of  
the trade and public to the following announcement:—  
EVERY COIL OF FUSE MANUFACTURED by them has TWO SEPARATE  
THREADS PASSING THROUGH THE COLUMN OF GUNPOWDER, and BICK-  
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tendent of the United States Special Commissioners of Mines, Mining  
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THESE MACHINES are constructed to meet the requirements of  
Mountainous Districts, where the transmission of heavy ma-  
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The Machines are complete in themselves, and require no masonry  
or any other foundation, and can be driven by either steam or water  
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Estimates and full particulars on application, as above.

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Also, GENERAL MINING MAP OF UTAH, showing twenty-eight of the  
principal Mining Districts adjacent to Salt Lake City, and location of the most  
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Also, NEW MAP OF LITTLE AND BIG COTTONWOOD MINING DISTRICTS  
showing the location of over Four Hundred Mines and Tunnel Sites, together  
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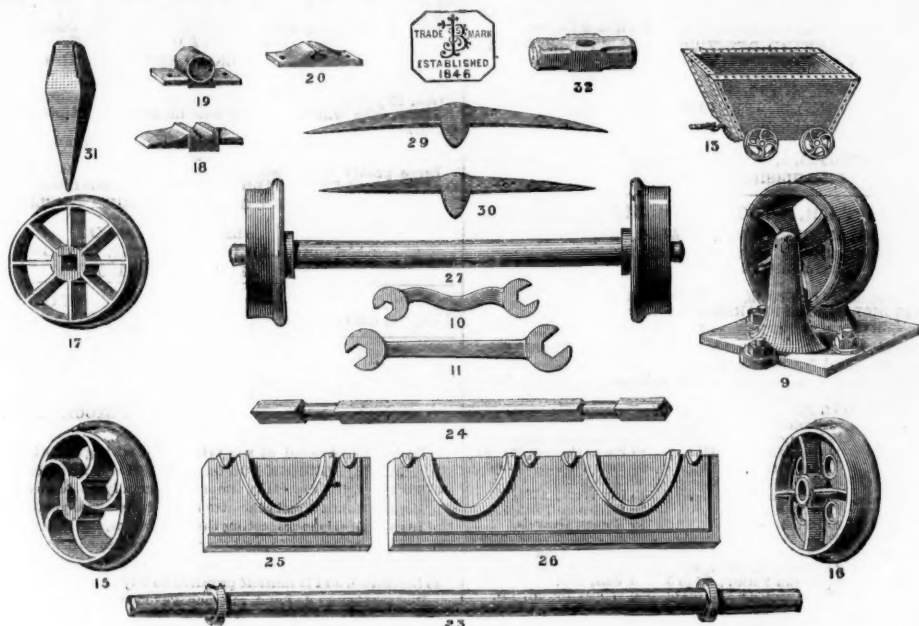
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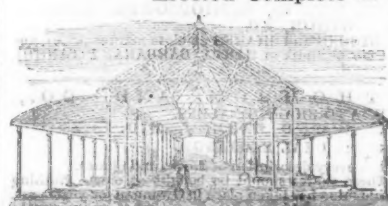
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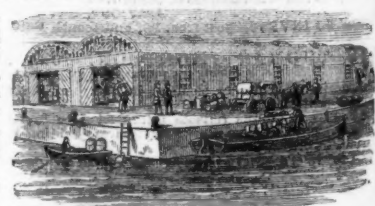
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#### ON EXPLOSIONS IN MINES.

At the North Staffordshire Mining Institute meeting held at Stoke-on-Trent, on Monday (Mr. JOHN BROWN, of Hednesford, in the chair), the committee appointed at a previous meeting to consider the question of explosions in mines, and the Mines Regulation Act, arising out of a paper read by Mr. J. G. Bakewell, before the Institute, presented a report in which they recommended—that before any fresh legislation is undertaken by Parliament, the Government is urged to have the whole subject of explosions in mines thoroughly investigated by the highest scientific attainments of the age, more particularly as to the effect of dust in causing or extending an explosion; the effect of compression caused by a blown-out shot, or other means, on air only slightly charged with gas, the attainment of an explosive which, when blown out, shall not give a flame, and the best means of lighting fiery mines, so as, if possible, to obtain a better light, and one not so capable of being tampered with. That, as many of the present regulations, from their impracticable character, the impossibility of avoiding a breach of them, and the penalties attaching to such an unavoidable breach, are driving many men of high standing from the positions of certificated colliery managers, and young men who have theoretically satisfied the examiners, but have not acquired a sufficient knowledge of the management of a pit, are being substituted for them. It is most desirable such regulations should be altered so as to render the carrying of them out "reasonably practical." The committee further suggest that, with a view to raise the status of certificated colliery managers, underlookers having certificates of competency and being appointed by the manager, shall be in personal charge of every pit, and responsible for the due fulfilment of all such duties as can only be satisfactorily performed by daily supervision and direction, leaving the manager responsible only for general superintendence and direction; that the manager shall be required to make a periodical inspection of every mine in his charge, and to live within a reasonable distance of the colliery, so as to be accessible to the underlooker in cases of doubt and difficulty; that some limitation shall be placed on the responsibility of the owner or agent; that, with a view to remedy the unfairness of the present system of inspection, prosecutions under the Act shall be conducted by a Government official, assisted by a small body of assessors, to whom the local inspector shall furnish a fair report of every inspection he makes of the colliery, as well as to the certificated manager of the colliery.—In order that the discussion should have a practical issue, it was decided that the President should be requested to see Mr. Williams, the secretary of the Royal Commission, on the subject of the best means of preventing accidents in mines, and lay this matter before him, and then advise the Institute whether any further steps could be taken to bring the question before that Commission, either by waiting upon them officially or by waiting upon the Home Secretary.

In the course of a long discussion on the first part of the report, Mr. JOHN MACDONALD said Government Inspectors of Mines were now admitting that if the presence of dust was not a separate cause of danger, it was a cause of increased danger when mixed with fire-damp.—Mr. SAWYER said there was in France a commission of enquiry on the subject of accidents in mines, especially with regard to fire-damp and explosions. MM. Varpilleux and Vidal held that explosions could result from dust alone, but MM. Villaine, Gonthier, Pincil, and the majority of the French engineers were of opinion that to render dust explosive it must be mixed with a certain percentage of gas, though they did not state the quantity. The intensity of the effect depended upon the mode of ignition. Several members of the Institute spoke to the same effect. It was stated that the present report of the committee was the outcome of the labours of a previous committee, who had experimented with dust. They had tried dust in a footrail, and had caused an immense body of flame in the open air where there was dust and not a particle of gas. They were of opinion that experiments ought to be made by persons of higher scientific attainments and by persons of authority, such as the Royal Commission, which had been appointed.—Mr. J. LUCAS declared cases had come within his own knowledge where dust had fired after a blown-out shot, in places where there was no gas. After discussing the effect of compression caused by a blown-out shot on air only slightly charged with gas, the subject of lighting mines was dwelt upon. It was urged, on the one hand, that some of the existing lamps, with proper oil and proper attention, were sufficient; and that the use of inefficient lamps should be prohibited.

Mr. BAKEWELL's contention was that it was of the highest importance to have a light for mines such as the electric light, or some other kind which did not depend upon air for its combustion, and which, though inflammable, might be enclosed and made safe. In enforcing this view he said an improved light was necessary, in order to enable the men to see better and guard more effectually against falls of roofs, which caused nine deaths for every one resulting from explosions in mines. He urged this point with much earnestness.—In reply, it was stated that, however suitable the electric light might be for main roads of a pit, it would not do for working places, where the wires would be liable to be constantly disarranged by falls of roof and other causes.—The further discussion of the report was adjourned.

**AMERICAN LOCOMOTIVES.**—Advices from New York state that a large new locomotive, constructed by the Baldwin Locomotive Works, to be run on the Bound Brook branch of the Philadelphia and Reading Railroad, and which has since the suspension of that company remained in possession of its builders, has been purchased by Mr. F. W. Eames, of Watertown, New York, for brake trials and tests in England. It will be immediately fitted with the Eames Duplex Automatic Vacuum Brake and shipped to London. Mr. Eames proposes, while showing the action of the Eames brake on railway trains at the highest speed which it is possible to attain, at the same time to settle the vexed question of the relative superiority of American and English locomotives.

**STEEL-MELTING FURNACES.**—With a view to render steel-melting and other gas-heated furnaces more durable and less expensive as regards repairs Mr. THOMAS WILLIAMSON, of the Steel Company of Scotland, Glasgow, proposes certain improvements which are especially applicable to the well-known kind having four regenerative chambers below the furnace, there being an air-chamber and a gas-chamber beneath or partly beneath each end of the furnace. In one modification embodying the improvements there are at each end three vertical air-flues and two vertical gas-flues, communicating at their lower parts respectively with the air and gas chambers, and at their upper ends with the interior of the reverberatory or main chamber of the furnace. The five vertical flues are arranged just so much out of line with each other when viewed in horizontal section as to allow of the necessary thickness of brickwork between them, such brickwork assuming a zig-zag form at the lower part where it constitutes the partition between the air and gas chambers. The flues extend quite down to the bottoms of the air and gas chambers, but the open regenerative brickwork in the chambers is arranged or built up so that the communications of such open brickwork with the vertical flues is at the upper parts of the chambers. With this arrangement when the heated gases are passing down the vertical flues they do not beat downwards on the open brickwork, which is consequently less liable to be fused; whilst at the same time any fused material passing down the flues does not choke the open brickwork but falls to the bottom of the flues. The outer walls of the

vertical flues at the part above the reverberatory chambers are made to follow the contour of the flues, so as to present almost the same thickness at all parts, and to be subjected as uniformly as possible to the action of changing temperatures. Between the two pairs of regenerative chambers there is constructed a chamber beneath the middle of the furnace as usual, but this chamber is availed of to lead air up under and about the furnace bed, such air entering from a pit or chamber at one side and passing up through flues made in the roof of the middle chamber for the purpose.

#### WATSON BROTHERS' MINING CIRCULAR.

WATSON BROTHERS,  
MINEOWNERS, STOCK AND SHARE DEALERS, &C.  
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In the year 1843, when mining was almost unknown to the general public attention was first called to its advantages, when properly conducted, in the "Compendium of British Mining," commenced in 1837, and published in 1843, by Mr. WATSON, F.G.S., author of "Gleanings among Mines and Miners," "Records of Ancient Mining," "Cornish Notes" (first series, 1862), "Cornish Notes" (second series, 1863), "The Progress of Mining," with Statistics of the Mining Interest, annually for 21 years, &c., &c. In the Compendium, published in 1843, Mr. WATSON was the first to recommend the system of a "division of small risks in several mines, ensuring the success in the aggregate," and Messrs. WATSON BROTHERS have always a selected list on hand. Perhaps at no former period in the annals of mining has there been more peculiar need of honest and experienced advice in regard to mines and sharedealing than there is at present; and from the lengthened experience of Messrs. WATSON BROTHERS they are emboldened to offer, thus publicly, their best services and advice to all connected with mines and mining.

Messrs. WATSON BROTHERS are daily asked their opinion of particular mines, as well as to recommend mines to invest or speculate in, and they give their advice and recommend mines to the best of their judgment and ability, founded on the best practical advice they can obtain from the mining districts, but they will not be held responsible, nor subject to blame, if results do not always equal the expectations they may have held out in a property so fluctuating as mining.

The great extension of mining business, the difficulty so often complained of by country shareholders in getting accurate and disinterested information as to the state of Cornish and Foreign Mines, and of the financial and real position of mining companies generally, have induced Messrs. WATSON BROTHERS to make their Circular now published in the *Mining Journal* more extensively known, and to state—

That they issue daily to clients and others who apply for it a Price List (as supplied to most of the London and country papers), giving the closing prices of Mining Shares up to Four o'clock.

They also buy and sell shares for immediate cash, for the usual fortnightly settlement in all Mines dealt in on the Mining and Stock Exchanges, at the close market prices of the day, free of all charge for commission. They deal also, on the same terms, in the Public Funds, Railways, Telegraphs, and all other securities dealt in on the Stock Exchange.

Having agents in all the mining districts, they are constantly getting mines inspected for their own guidance, and will also obtain special reports of any particular mine for their clients, for the inspecting agent's fee of £2 2s.

The question of "dues," royalty, or rent on mines, and the heartedness of lords of mining sets, is one that has agitated the mining community as long as we can remember, and we fear it will be so unto the end. The extreme liberality of some lords, and especially of one, to agricultural tenants has been paraded throughout the length and breadth of the land, but no material assistance has ever been given by that one to his mining tenants in the way of reduction of dues or easement of the most stringent covenants that leases can contain. Their noses, at least, are kept pretty close to the grindstone.

The Woods and Forests exact one-eighth of the whole produce as rent from Great Laxey, and are great screws in other respects, as we know to our cost. If "A" takes a sett from them, works it, makes a discovery, and sells it for (say) 10,000l., the Crown requires, or did require, a fourth part of the profit so made, in addition to dead rent and royalty. Once upon a time we lost over 500l. ourselves by refusing to submit to such an arrangement.

In mining leases generally, in addition to the dues of 1-10th up to 1-20th of all the produce made marketable, there is generally a dead rent merging in the royalty, and a charge of 100l. per acre for all land destroyed, or upon which the stuff drawn from the mine or rubble or rubbish is deposited. Also for land required for machinery and dressing-floors, and oftentimes this is paid for land not worth 10l. per acre in the market.

There are some lords, of course, who remit dues in bad times, and meet the miners in a liberal spirit; but these are the exceptions, and much should be made of them. The Duchy of Cornwall acts liberally.

A clerical error occurred in our last reference to Cwm Pryf—"2000" was given for "20,000." An advertisement in last week's *Journal* would give the further information required.

The total return for June at the Pitangui Mine was 3775 oits. of gold, valued at 1603l. 7s. 4d. The Ouro Podre vein had continued poor down to the 20, after which it began to improve, and in the first three days of July the return was 619 oits., valued at 263l. 3s. 7d.

We cannot enter into personal disputes.

There can be no doubt that many people were induced to apply for shares in the Indian Gold Mining Companies, believing from the glowing reports of the prospectuses that fabulous riches were at hand, and only wanted plucking. And now many, like our correspondents, are disappointed to find from the agents' reports that the risks and uncertainties of mining have to be encountered, and "trial shafts" and other speculative operations are the chief things spoken of.

The standard for tin ore reached its highest point for the last 20 years in 1872, when it stood at 148, or 7l. 8s. per cwt. In 1878 it dropped to 51, or 2l. 11s. per cwt., which was the lowest point for 20 years. The present standard is 85, or 4l. 5s. per cwt. During 1879 the highest standard was 86, lowest 54, and the quantity of black tin sold 13,389 tons; 1878, 14,220 tons.

Any amount of shares in a Cost-book mine can be transferred on a sixpenny stamp. This was a concession obtained from Mr. Gladstone 20 years ago through the exertions of the writer and others in the *Mining Journal*. In transferring shares in limited companies there is, of course, an *ad valorem* duty, which comes very heavy at times. The Cost-book is simple, and perfectly safe when properly conducted, and we do not recommend any that are not so conducted.

This is the holiday season, and it is quite useless trying to force sales in anything.

FROM MR. JOHN B. REYNOLDS.—The markets during the week have been steady, and prices have been fairly well sustained. One of the chief features has been the demand for cheap shares in the St. Agnes district—notably, New Kitty. It appears that the western end in West Kitty going towards New Kitty shows decidedly favourable signs, and should this progress, as appearances seem to indicate, New Kitty shares must in the present state of the market have a considerable advance. Wheal Coates is favourably spoken of, and shares are worth attention. Polberro is being re-started, and as this mine practically adjoins West Kitty, and is in the rich group, it is being started under favourable auspices. Wheal Kitty shares are being quietly held, and quotations remain the same, whilst it is evident that there is an eager disposition to buy West Kitty at low prices. All these mines are amongst those in the St. Agnes group, and most of them promise to attract as much attention in the future as they have done in the past. The Camborne and Hlogan districts are always to the fore, and localities which have produced Dolcoath, Cook's Kitchen, Carn Brea, East Pool, West Basset, and many other mines may well be favourite spots for the *bona fide* investors in British mines.

**CHEMICALS, MINERALS, AND METALS.**—Messrs. J. Berger Spence and Co. (Aug. 7).—Alum: Loose Lump, 5l. 7s. 6d.; ground, 7l. 5s.—Arsenic: Best whitepowdered, 10l. 10s.—Bleaching Powder, 5l. 17s. 6d.—Borax: Refined English, 60l.—Copperas: Green, 47s. 6d.—Copper: Sulphate, 21l. 10s.—Nitrate of Lead, 25l.—Nitrate of Soda: 15s.—Potash: 10s. 6d.—Soda: Cream Caustic, 8l. 15s.—Sulphate of Zinc, 13l. 10s.—Sulphur: Roll, 9l.; flour, 10l. 15s.—Tin crystals, 6s. 6d. per lb.—White lead, 21l. 5s.—Brimstone: Best thirds, 5l. 15s.—China-Clay, 39s.—Ochre, 5l. 15s.—Oxide of Zinc, 25l. 10s.—Talc, 5l.—Umbur, 50s.—Copper: Best ingot, 67l.; seconds ingot, 66l.—Lead: Best soft English, 16l.—Pig-Iron, No. 4 Forge, 43s. 6d.—Spelter, 19l. 10s.—Tin: British common block, 94l.—Naphtha, Miscible 4s. 6d.

#### Original Correspondence.

##### FLAGSTAFF MINING COMPANY.

SIR,—I have read Mr. Maxwell's letter in last week's *Journal* and regret he did not publish my answer, which was in effect that I had not stated that he was going to inspect the mines, that I knew very well that he could not be going out for such purpose, as I had not given him any authority and it was quite certain he would not be received there or allowed to go over the property. E. PEARSON.

[For remainder of Original Correspondence see this day's Supplement.]

##### MINING IN CORNWALL, 1880.

BY MINERO.

Mining requires a continuous flow of capital into the county for a proper development of lodes in length and depth. Such exploring being a speculative pursuit is limited to those possessors of surplus capital who are partial to investment in speculating labour.

Wherever mercantile communities congregate on "Change" on these great centres of commerce—London, Liverpool, Manchester, Glasgow, Birmingham, and other places, each and all readily supply millions sterling for investment in mining adventure in all the mineral districts of Europe, Asia, Africa, and America, but there exists among those capitalists a universal objection to invest in Cornish mines.

The objection is confined to the unbusiness-like mode of accounting for capital expended. However wealthy men may be, still they require, in all business matters, to have laid before them detailed items, that they may see the data on which to form an opinion of the cost, judge of management, and as to financial integrity.

Mr. Basset said at a Polytechnic meeting, "We must look to cheapening cost of production rather than to diminution of foreign supplies for restoring to capital invested in Cornish mining that reasonable return without which it will eventually be withdrawn."

Take up a bi-monthly or any period of cost-book mining account; separate the figures into productive and unproductive parts. Again analyse the items in each part, dividing them into necessary and unnecessary. This will produce evidence showing where sound economy can be carried out, largely cheapening cost of production, without interfering in any way with progress of development.

Nature gives Cornwall an inexhaustible supply of raw produce; man's labour imparts to it an exchangeable value. It is the proper management of this labour which will yield to the country an annual increasing revenue for payment of labour and its materials, and lords' dues, with profit on capital invested in the laying open its mineral rocks.

##### COST-BOOK MINE ACCOUNTING.

During the period which has elapsed since the custom of mining adventures consisting only of 64 shares was extended to thousands of shares, experience has shown that the books and forms then in use are susceptible of being rendered more complete, that the requirements of capital for its protection and information for shareholders be fully met.

Order is wanted where confusion prevails, where darkness and mystery abound each branch of the management that the wholesome light of day may be let in.

Unless a capital was employed in furnishing raw produce to a certain degree of abundance neither manufactures nor trade of any kind could exist.

The confidence of capitalists is required in the interests of Cornish mining; consequently, sound policy demands that the form of account shall give them the information they may require. Figures are the best exponents of facts. Without details the real cost of labour and its materials cannot be known.

From the gross statement of sums in the account submitted to a general meeting of shareholders it is impossible to tell from them what the position of the company is. This is to be regretted, but it does not follow that the pursuer is seeking to withhold information; he is simply following an old-established, but very bad custom.

In obscure statements there can be no safety for capital.

The expenditure should be entered in the cost-book in a classified plan, whereby the outlay may be arranged and classified under well-defined heads, bearing close analogy with the different kinds of work.

It is of permanent importance to a mining company that the system of book-keeping adopted should be of the most complete, exhaustive description. One thing is quite certain, that all companies which could in this way show that they stand on a sound basis would have no difficulty in raising capital for exploration.

Looking at the matter as a mere question of figures, and the keeping of accounts intelligible to the most common understanding, it is impossible to conceive anything more simple than Cost-Book mining accounts might be rendered.

There is evidence showing that within living memory the rocks of Cornwall have yielded by sales of minerals 120,000,000l. sterling.

There is also evidence to show the winding-up during the last few years of 300 cost-book mines in the Stannaries Court. The sales of minerals were a gain to the country. The windings-up were a heavy loss to the mining companies.

Cornish mining is charged with such loss by the foolish and thoughtless, but an examination of the cost-books proves that the rocks of Cornwall did not receive for development 5 per cent. of the capital sunk. Waste in financial and ignorance in mining management absorbed and destroyed large masses of honest capital.

The mineral lodes of Cornwall have been but partially explored; there has been no properly continuous development. What is termed searching the bowels of the earth is merely scratching the exterior. The deepest mines which have sunk penetrate to a depth hardly surpassing the ten thousandth part of the distance between its surface and its centre.

The present bi-monthly accounts published of development below a depth of 350 fms. demonstrate increasing wealth with increasing depth.

Two mines working in Gwennap during a period of 60 years, to a depth of 300 fms., sold as follows:—

	Ore.	Value.
United Mines .....	549,740	£3,083,130
Consols Mine .....	538,080	3,527,842

Total .....

A great tin lode runs through the United Mines sett, hardly yet properly known, which is traceable 7 miles in length west. In the run of these 7 miles are many valuable sites for mining, both north and south, that will give good profit to capital employed in opening up the numerous lodes of tin and copper ores abounding in these seven miles of inexhaustible mineral ground.

It is thus an important point, for the benefit of the district, to prepare the way for new capital, by establishing a plain simple form of account, self-explanatory, which out-adventurers may readily understand as to outlay or progress to profit.

There is no more economical and surer plan by which to attract out-adventurers to join in Cornish mining adventure than by instituting an independent monthly audit, covering all expenditure, surface and underground. The auditor having verified cost-book charges, cash, merchants' bills, could readily frame a statement of accounts, dealing with the summaries of costs under each head, thereby making more clear profit or loss figures, and, if required, show the profit and loss account on each underground network and tribute contract.

The influence over all the persons employed in an establishment of an independent, critical scrutiny, and demonstrative examination of the whole affairs of a mine, is not easily to be estimated, either in a pecuniary or moral point of view. It would win and command confidence among independent out-adventurers, and surplus capital would largely find its way into the working of mines in Cornwall.—*West Briton*.

**COAL IN JAPAN.**—An extensive coal bed, estimated as capable of yielding 3,000,000 tons daily for a century, is now being worked near Kigashie, on the Kiou Kads, Japan. The Minister of Public Works has visited it with an English engineer, in order to examine the feasibility of a railway therefrom to Modji, a town on the inland sea, and the works are to be commenced this summer. There is also an idea of making Modji a naval station, that Indian and other foreign vessels stopping at Akamagasaki might coal there.

**COAL IN RUSSIA.**—Inquiries which have recently been made on behalf of the Russian Government with respect to the coal-mining industry in the Ural district are said to have proved very satisfactory. The St. Petersburg Herald learns from Perm that General Bogdanovitch, who is now visiting that locality in connection with the proposal for a South Siberian railway, has ascertained that the Ural Coal Mining Company has already, in the first year of its working, delivered 40,000 tons to the well-known metallurgical works of Prince Demidoff at Tagil. During the coming year it is intended to convert some of the coal found in the locality into coke, and to market it in this form. It is estimated that coal from the Ural pits can be transported down the Kama and delivered for use on the locomotives of the South Siberian Railway at about 15s. per ton. Experiments which have been made are said to have demonstrated that the quality of the coal for heating purposes is very high.

**LLANRWST LEAD MINING COMPANY.**—An extraordinary general meeting of shareholders was held at the Guildhall Tavern on Tuesday, for the purpose of voluntarily winding up the company, Capt. A. S. Gilbert in the chair. The notice convening the meeting having been read by the Secretary, Mr. W. H. Pyne, the Chairman put the following resolution:—"That it has been proved to the satisfaction of the company that the company cannot, by reason of its liabilities, continue its business, and that it is desirable to wind up the same, and that the company be wound up accordingly." Mr. Scott seconded the resolution, which was carried with but one dissentient. The Chairman then moved "That a liquidator be appointed." This was seconded by Dr. Gee and carried unanimously. Mr. Scott proposed, "That Mr. William Henry Pennell, of Basinghall-street, London, chartered accountant, be appointed liquidator." This was put by the Chairman, seconded by Mr. G. S. Gregory, and carried unanimously. The business then terminated with the usual vote of thanks to the Chairman. After the conclusion of the business for which the meet-







## Mining Correspondence.

## BRITISH MINES.

**ABERLYN.**—J. Roberts, Aug. 11: At the Valley cross-cut we have driven a little over 2 fms. during the past month; the ground is a little easier for driving, letting out more water than it has been. There is also more lead and blende in the joints, which would give us to expect that the lode must be near. We have driven a little over 2 fms. in No. 3 cross-cut; here, too, we have lead in blende in the joints which cross the end continually. When we started this cross-cut I calculated that the maximum distance would be about 12 fathoms; we are now in 11½ fathoms, and the lode must have altered its direction considerably if we do not get it directly. No. 2 end, on the hard lode, is looking very well for blende, with occasional stones of lead. I am very strongly of opinion that this end will enter into good lead ground as it gets away under the farm cottage. We are dressing up the blende stuff that we have on hand, which I expect will take us two months.

**BEDFORD UNITED.**—R. Goldsworthy, Aug. 12: I have nothing new to report this week with regard to operations on the north lode, there being no change to notice. The shaft is sinking on the course of Bridge lode, and good progress is being made, the separation of the rods for pumping purposes are being carried out with all dispatch.

**BELL VERN.**—James Bray, Aug. 5: During this week we have passed through a branch 6 in. wide, which is producing good stones of tin. The branch is underlaying a little south towards the Gobbins lode, which I consider to be a very good indication.

**BELOWDA.**—Thomas Parkyn, Aug. 12: I have no alteration to mention as regards the Beacon Borough lode; it is still very large, and contains good paying work for tin. I am not in a position yet to state its exact work per fathom, but shall be in a short time, as soon as I know its size. We are opening on this lode by surface workings, and shall have an open stope, and the tin stuff will be trammed from the stope direct to the stamps. On Webb's lode in the adit we have frequently rich bunches of tin, and the lode this morning presents a very promising appearance indeed; we are approaching the junction of another lode, and from our dialling we are not far off from it. I am saving the lode stuff now sending up to surface by itself for one fathom, and will ascertain its value, when you shall know. I have had a portion of the timber delivered on the mine, and am now repairing the floors and stamps previous to starting the machinery.

**BLAUE CAELAN UNITED.**—J. Pell, Aug. 12: I have no change to report this week. Good progress working in all the bargains, the stopes yielding good ore. Another parcel of lead has been dispatched this week. The driving on the lode towards Esgrair Mine, south of Caelan Brook, is without lead, but is a very fine lode. All machinery in good order.

**BLUE HILLS.**—S. Bennetts, R. Harris, Aug. 7: The 42 east end is worth 4½ per fathom; the same level, west end, is worth 6½ per fathom. The 30 east end is worth 10½ per fathom, and the 20 east 4½ per fathom. At the dump shaft the 50 east end, on the Pink lode, is worth 8½ per fathom; the west end is producing very good work, and the lode improving.

**BODDERS.**—H. Hotchkiss, Aug. 12: We have now completed the sinking of Meadow shaft 6 ft. below the 110 for water room, and have commenced driving the 110 cross-cut towards Maes-y-Pwll lode, and from the nature of the rock I have every reason to expect to find it rich at this depth. No other change.

**BWLCH UNITED.**—N. Bray, Aug. 7: The shaftmen are engaged in cutting lode at the 110; this work I am driving on as rapidly as possible. The lode in the 100 east, though still large, is again somewhat disordered, but the stratification keeps a good deal together, and for an improvement shortly. No. 2 stope in the back of the 70 is worth fully 1 ton of silver-lead ore per fathom. No. 2 stope from the end of winze is producing good paying ore. A trial stope abutting on the slide in the back of the 60 east is producing capital ore; this point is going up into new ground, and I anticipate good results. The dressing and other machinery is working very well, and I shall shortly commence dressing ore from underground, as the flooring is getting into good condition.

**N. Bray, Aug. 11:** The trial stope in the back of the 60, east of Ritchie's shaft, still looks good, and is producing good ore, and to follow up this discovery I have ordered the necessary timber for fixing stall, so as to work the ground to advantage. No. 1 stope in the back of the 70 continues to produce 20 cwt. of silver-lead ore per fathom. The 100, driving east, is on a large lode, and I am looking forward for an improvement for ore in this drive shortly as the country rock seems settled and congenial. The shaftmen are going on steadily with the opening up of the lode at the 110, and I shall have to procure timber at once for dividing and casing the shaft for bringing down the machine kibble. The crushing and dressing machinery is working fairly well, and settling into good working trim, and having commenced to crush the ore from the stope and other underground bargains I shall get about a sampling of ore as soon as I can.

**CARNARVON.**—John Roberts, Aug. 11: The water is continually increasing in the 90 end, and I should not be surprised if we should any day let down the water from the sump. The new trial on the side of the mountain on the western ground is producing large stones of iron pyrites, and looking very kindly for copper. We are driving a short cross-cut at the bottom of the mountain to get under the sump, which is looking very kindly. We are getting on as fast as possible with the new engine and shaft.

**CARON.**—J. Kitto and Son, Aug. 7: The new engine-shaft is now just 12 fms. below the 22, and will be down the required depth for a new level in about a fortnight from this date, when we shall immediately proceed to fix the necessary pump, rods, &c., and then commence to drive out on the course of the lode. The 22, driving east, is in a strong and hard lode, but there has been no improvement in its general character or producing qualities since the date of our last monthly report. We expect, however, that a change for the better will soon take place, as we are approaching very nearly to the perpendicular of a bunch of ore discovered in the driving of, and gone down below the sole of the 10. The machinery is all in good repair, and working very satisfactorily.

**CLEMENTINA.**—J. Roberts, W. Sandoe, Aug. 11: The stopes are looking just as reported last week. We are laying down the rails in the bottom of the 34 so as to do away with the wheeling of the stuff. When this is completed we shall put some of the men from the sump to drive the end northwards.

**COMBARTIN.**—J. Harris, J. Comer, Aug. 7: To-day being our monthly setting we have set the following bargains:—The 17 to drive north-west on the count-lode, by the sole of the 5½, 10½, 11½, 12½, 13½, 14½, 15½, 16½, 17½, 18½, 19½, 20½, 21½, 22½, 23½, 24½, 25½, 26½, 27½, 28½, 29½, 30½, 31½, 32½, 33½, 34½, 35½, 36½, 37½, 38½, 39½, 40½, 41½, 42½, 43½, 44½, 45½, 46½, 47½, 48½, 49½, 50½, 51½, 52½, 53½, 54½, 55½, 56½, 57½, 58½, 59½, 60½, 61½, 62½, 63½, 64½, 65½, 66½, 67½, 68½, 69½, 70½, 71½, 72½, 73½, 74½, 75½, 76½, 77½, 78½, 79½, 80½, 81½, 82½, 83½, 84½, 85½, 86½, 87½, 88½, 89½, 90½, 91½, 92½, 93½, 94½, 95½, 96½, 97½, 98½, 99½, 100½, 101½, 102½, 103½, 104½, 105½, 106½, 107½, 108½, 109½, 110½, 111½, 112½, 113½, 114½, 115½, 116½, 117½, 118½, 119½, 120½, 121½, 122½, 123½, 124½, 125½, 126½, 127½, 128½, 129½, 130½, 131½, 132½, 133½, 134½, 135½, 136½, 137½, 138½, 139½, 140½, 141½, 142½, 143½, 144½, 145½, 146½, 147½, 148½, 149½, 150½, 151½, 152½, 153½, 154½, 155½, 156½, 157½, 158½, 159½, 160½, 161½, 162½, 163½, 164½, 165½, 166½, 167½, 168½, 169½, 170½, 171½, 172½, 173½, 174½, 175½, 176½, 177½, 178½, 179½, 180½, 181½, 182½, 183½, 184½, 185½, 186½, 187½, 188½, 189½, 190½, 191½, 192½, 193½, 194½, 195½, 196½, 197½, 198½, 199½, 200½, 201½, 202½, 203½, 204½, 205½, 206½, 207½, 208½, 209½, 210½, 211½, 212½, 213½, 214½, 215½, 216½, 217½, 218½, 219½, 220½, 221½, 222½, 223½, 224½, 225½, 226½, 227½, 228½, 229½, 230½, 231½, 232½, 233½, 234½, 235½, 236½, 237½, 238½, 239½, 240½, 241½, 242½, 243½, 244½, 245½, 246½, 247½, 248½, 249½, 250½, 251½, 252½, 253½, 254½, 255½, 256½, 257½, 258½, 259½, 260½, 261½, 262½, 263½, 264½, 265½, 266½, 267½, 268½, 269½, 270½, 271½, 272½, 273½, 274½, 275½, 276½, 277½, 278½, 279½, 280½, 281½, 282½, 283½, 284½, 285½, 286½, 287½, 288½, 289½, 290½, 291½, 292½, 293½, 294½, 295½, 296½, 297½, 298½, 299½, 300½, 301½, 302½, 303½, 304½, 305½, 306½, 307½, 308½, 309½, 310½, 311½, 312½, 313½, 314½, 315½, 316½, 317½, 318½, 319½, 320½, 321½, 322½, 323½, 324½, 325½, 326½, 327½, 328½, 329½, 330½, 331½, 332½, 333½, 334½, 335½, 336½, 337½, 338½, 339½, 340½, 341½, 342½, 343½, 344½, 345½, 346½, 347½, 348½, 349½, 350½, 351½, 352½, 353½, 354½, 355½, 356½, 357½, 358½, 359½, 360½, 361½, 362½, 363½, 364½, 365½, 366½, 367½, 368½, 369½, 370½, 371½, 372½, 373½, 374½, 375½, 376½, 377½, 378½, 379½, 380½, 381½, 382½, 383½, 384½, 385½, 386½, 387½, 388½, 389½, 390½, 391½, 392½, 393½, 394½, 395½, 396½, 397½, 398½, 399½, 400½, 401½, 402½, 403½, 404½, 405½, 406½, 407½, 408½, 409½, 410½, 411½, 412½, 413½, 414½, 415½, 416½, 417½, 418½, 419½, 420½, 421½, 422½, 423½, 424½, 425½, 426½, 427½, 428½, 429½, 430½, 431½, 432½, 433½, 434½, 435½, 436½, 437½, 438½, 439½, 440½, 441½, 442½, 443½, 444½, 445½, 446½, 447½, 448½, 449½, 450½, 451½, 452½, 453½, 454½, 455½, 456½, 457½, 458½, 459½, 460½, 461½, 462½, 463½, 464½, 465½, 466½, 467½, 468½, 469½, 470½, 471½, 472½, 473½, 474½, 475½, 476½, 477½, 478½, 479½, 480½, 481½, 482½, 483½, 484½, 485½, 486½, 487½, 488½, 489½, 490½, 491½, 492½, 493½, 494½, 495½, 496½, 497½, 498½, 499½, 500½, 501½, 502½, 503½, 504½, 505½, 506½, 507½, 508½, 509½, 510½, 511½, 512½, 513½, 514½, 515½, 516½, 517½, 518½, 519½, 520½, 521½, 522½, 523½, 524½, 525½, 526½, 527½, 528½, 529½, 530½, 531½, 532½, 533½, 534½, 535½, 536½, 537½, 538½, 539½, 540½, 541½, 542½, 543½, 544½, 545½, 546½, 547½, 548½, 549½, 550½, 551½, 552½, 553½, 554½, 555½, 556½, 557½, 558½, 559½, 560½, 561½, 562½, 563½, 564½, 565½, 566½, 567½, 568½, 569½, 570½, 571½, 572½, 573½, 574½, 575½, 576½, 577½, 578½, 579½, 580½, 581½, 582½, 583½, 584½, 585½, 586½, 587½, 588½, 589½, 590½, 591½, 592½, 593½, 594½, 595½, 596½, 597½, 598½, 599½, 600½, 601½, 602½, 603½, 604½, 605½, 606½, 607½, 608½, 609½, 610½, 611½, 612½, 613½, 614½, 615½, 616½, 617½, 618½, 619½, 620½, 621½, 622½, 623½, 624½, 625½, 626½, 627½, 628½, 629½, 630½, 631½, 632½, 633½, 634½, 635½, 636½, 637½, 638½, 639½, 640½, 641½, 642½, 643½, 644½, 645½, 646½, 647½, 648½, 649½, 650½, 651½, 652½, 653½, 654½, 655½, 656½, 657½, 658½, 659½, 660½, 661½, 662½, 663½, 664½, 665½, 666½, 667½, 668½, 669½, 670½, 671½, 672½, 673½, 674½, 675½, 676½, 677½, 678½, 679½, 680½, 681½, 682½, 683½, 684½, 685½, 686½, 687½, 688½, 689½, 690½, 691½, 692½, 693½, 694½, 695½, 696½, 697½, 698½, 699½, 700½, 701½, 702½, 703½, 704½, 705½, 706½, 707½, 708½, 709½, 710½, 711½, 712½, 713½, 714½, 715½, 716½, 717½, 718½, 719½, 720½, 721½, 722½, 723½, 724½, 725½, 726½, 727½, 728½, 729½, 730½, 731½, 732½, 733½, 734½, 735½, 736½, 737½, 738½, 739½, 740½, 741½, 742½, 743½, 744½, 745½, 746½, 747½, 748½, 749½, 750½, 751½, 752½, 753½, 754½, 755½, 756½, 757½, 758½, 759½, 760½, 761½, 762½, 763½, 764½, 765½, 766½, 767½, 768½, 769½, 770½, 771½, 772½, 773½, 774½, 775½, 776½, 777½, 778½, 779½, 780½, 781½, 782½, 783½, 784½, 785½, 786½, 787½, 788½, 789½, 790½, 791½, 792½, 793½, 794½, 795½, 796½, 797½, 798½, 799½, 800½, 801½, 802½, 803½, 804½, 805½, 806½, 807½, 808½, 809½, 810½, 811½, 812½, 813½, 814½, 815½, 816½, 817½, 818½, 819½, 820½, 821½, 822½, 823½, 824½, 825½, 826½, 827½, 828½, 829½, 830½, 831½, 832½, 833½, 834½, 835½, 836½, 837½, 838½, 839½, 840½, 841½, 842½, 843½, 844½, 845½, 846½, 847½, 848½, 849½, 850½, 851½, 852½, 853½, 854½, 855½, 856½, 857½, 858½, 859½, 860½, 861½, 862½, 863½, 864½, 865½, 866½, 867½, 868½, 869½, 870½, 871½, 872½, 873½, 874½, 875½, 876½, 877½, 878½, 879½, 880½, 881½, 882½, 883½, 884½, 885½, 886½, 887½, 888½, 889½, 890½, 891½, 892½, 893½, 894½, 895½, 896½, 897½, 898½, 899½, 900½, 901½, 902½, 903½, 904½, 905½, 906½, 907½, 908½, 909½, 910½, 911½, 912½, 913½, 914½, 915½, 916½, 917½, 918½, 919½, 920½, 921½, 922½, 923½, 924½, 925½, 926½, 927½, 928½, 929½, 930½, 931½, 932½, 933½, 934½, 935½, 936½, 937½, 938½, 939½, 940½, 941½, 942½, 943½, 944½, 945½, 946½, 947½, 948½, 949½, 950½, 951½, 952½, 953½, 954½, 955½, 956½, 957½, 958½, 959½, 960½, 961½, 962½, 963½, 964½, 965½, 966½, 967½, 968½, 969½, 970½, 971½, 972½, 973½, 974½, 975½, 976½, 977½, 978½, 979½, 980½, 981½, 982½, 983½, 984½, 985½, 986½, 987½, 988½, 989½, 990½, 991½, 992½, 993½, 994½, 995½, 996½, 997½, 998½, 999½, 1000½, 1001½, 1002½, 1003½, 1004½, 1005½, 1006½, 1007½, 1008½, 1009½, 1010½, 1011½, 1012½, 1013½, 1014½, 1015½, 1016½, 1017½, 1018½, 1019½, 1020½, 1021½, 1022½, 1023½, 1024½, 1025½, 1026½, 1027½, 1028½, 1029½, 1030½, 1031½, 1032½, 1033½, 1034½, 1035½, 1036½, 1037½, 1038½, 1039½, 1040½, 1041½, 1042½, 1043½, 1044½, 1045½, 1046½, 1047½, 1048½, 1049½, 1050½, 1051½, 1052½, 1053½, 1054½, 1055½, 1056½, 1057½, 1058½, 1059½, 1060½, 1061½, 1062½, 1063½, 1064½, 1065½, 1066½, 1067½, 1068½, 1069½, 1070½, 1071½, 1072½, 1073½, 1074½, 1075½, 1076½, 1077½, 1078½, 1079½, 1080½, 1081½, 1082½, 1083½, 1084½, 1085½, 1086½, 1087½, 1088½, 1089½, 1090½, 1091½, 1092½, 1093½, 1094½, 1095½, 1096½, 1097½, 1098½, 1099½, 1100½, 1101½, 1102½, 1103½, 1104½, 1105½, 1106½, 1107½, 1108½, 1109½, 1110½, 1111½, 1112½, 1113½, 1114½, 1115½, 1116½, 1117½, 1118½, 1119½, 1120½, 1121½, 1122½, 1123½, 1124½, 1125½, 1126½, 1127½, 1128½, 1129½, 1130½, 1131½, 1132½, 1133½, 1134½, 1135½, 1136½, 1137½, 1138½, 1139½, 1140½, 1141½, 1142½, 1143½, 1144½, 1145½, 1146½, 1147½, 1148½, 1149½, 1150½, 1151½, 1152½, 1153½, 1154½, 1155½, 1156½, 1157½, 1158½, 1159½, 1160½, 1161½, 1162½, 1163½, 1164½, 1165½, 1166½, 1167½, 1168½, 1169½, 1170½, 1171½, 1172½, 1173½, 1174½, 1175½, 1176½, 1177½, 1178½, 1179½, 1180½, 1181½, 1182½, 1183½, 1184½, 1185½, 1186½, 1187½, 1188½, 1189½, 1190½, 1191½, 1192½, 1193½, 1194½, 1195½, 1196½, 1197½, 1198½, 1199½, 1200½, 1201½, 1202½, 1203½, 1204½, 1205½, 1206½, 1207½, 1208½, 1209½, 1210½, 1211½, 1212½, 1213½, 1214½, 1215½, 1216½, 1217½, 1218½, 1219½, 1220½, 1221½, 1222½, 1223½, 1224½, 1225½, 1226½, 1227½, 1228½, 1229½, 1230½, 1231½, 1232½, 1233½, 1234½, 1235½, 1236½, 1237½, 1238½, 1239½, 1240½, 1241½, 1242½, 1243½, 1244½, 1245½, 1246½, 1247½, 1248½, 1249½, 1250½, 1251½, 1252½, 1253½, 1254½, 1255½, 1256½, 1257½, 1258½, 1259½, 1260½, 1261½, 1262½, 1263½, 1264½, 1265½, 1266½, 1267½, 1268½, 1269½, 1270½, 1271½, 1272½, 1273½, 1274½, 1275½, 1276½, 1277½, 1278½, 1279½, 1280½, 1281½, 1282½, 1283½, 1284½, 1285½, 1286½, 1287½, 1288½, 1289½, 1290½, 1291½, 1292½, 1293½, 1294½, 1295½, 1296½, 1297½, 1298½, 1299½, 1300½, 1301½, 1302½, 1303½, 1304½, 1305½, 1306½, 1307½, 1308½, 1309½, 1310½, 1311½, 1312½, 1313½, 1314½, 1315½, 1316½, 1317½, 1318½, 1319½, 1320½, 1321½, 1322½, 1323½, 1324½, 1325½, 1326½, 1327½, 1328½, 1329½, 1330½, 1331½, 1332½, 1333½, 1334½, 1335½, 1336½, 1337½, 1338½, 1339½, 1340½, 1341½, 1342½, 1343½, 1344½, 1345½, 1346½, 1347½, 1348½, 1349½, 1350½, 1351½, 1352½, 1353½, 1354½, 1355½, 1356½, 1357½, 1358½, 1359½, 1360½, 1361½, 1362½, 1363½, 1364½, 1365½, 1366½, 1367½, 1368½, 1369½, 1370½, 1371½, 1372½, 1373½, 1374½, 1375½, 1376½, 1377½, 1378½, 1379½, 1380½, 1381½, 1382½, 1383½, 1384½, 1385½, 1386½, 1387½, 1388½, 1389½, 1390½, 1391½, 1392½, 1393½, 1394½, 1395½, 1396½, 1397½, 1398½, 1399½, 1400½, 1401½, 1402½, 1403½, 1404½, 1405½, 1406½, 1407½, 1408½, 1409½, 1410½, 1411½, 1412½, 1413½, 1414½, 1415½, 1416½, 1417½, 1418½, 1419½, 1420½, 1421½, 1422½, 1423½, 1424½, 1425½, 1426½, 1427½, 1428½, 1429½, 1430½, 1431½, 1432½, 1433½, 1434½, 1435½, 1436½, 1437½, 1438½, 1439½, 1440½, 1441½, 1442½, 1443½, 1444½, 1445½, 1446½, 1447½, 1448½, 1449½, 1450½, 1451½, 1452½, 1453½, 1454½, 1455½, 1456½, 1457½, 1458½, 1459½, 1460½, 1461½, 1462½, 1463½, 1464½, 1465½, 1466½, 1467½, 1468½, 1469½, 1470½, 1471½, 1472½, 1473½, 1474½, 1475½, 1476½, 1477½, 1478½, 1479½, 1480½, 1481½, 1482½, 1483½, 1484½, 1485½, 1486½, 1487½, 1488½, 1489½, 1490½, 1491½, 1492½, 1493½, 1494½, 1495½, 1496½, 1497½, 1498½, 1499½, 1500½, 1501½, 1502½, 1503½, 1504½, 1505½, 1506½, 1507½, 1508½, 1509½, 1510½, 1511½, 1512½, 1513½, 1514½, 1515½, 1516½, 1517½, 1518½, 1519½, 1520½, 1521½, 1522½, 1523½, 1524½, 1525½, 1526½, 1527½, 1528½, 1529½, 1530½, 1531½, 1532½, 1533½, 1534½, 1535½, 1536½, 1537½, 1538½, 1539½, 1540½, 1541½, 1542½, 1543½, 1544½, 1545½, 1546½, 1547½, 1548½, 1549½, 1550½, 1551½, 1552½, 1553½, 1554½, 1555½, 1556½, 1557½, 1558½, 1559½, 1560½, 1561½, 1562½, 1563½, 1564½, 1565½, 1566½, 1567½, 1568½, 1569½, 1570½, 1571½, 1572½, 1573½, 1574½, 1575½, 1576½, 1577½, 1578½, 1579½, 1580½, 1581½, 1582½, 1583½, 15



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main tunnel through the vein to intersect the two higher reefs. There is, I believe, still a fourth reef passing through its estates at a lower point, which I hope to prove. Our prospects are simply magnificent—second to none—and the company's estates are enormously enhanced. On the Richmond estates alone we could turn out an unlimited amount of stone daily if it were necessary. The same could be said of Neederock and Bolingbroke. I may mention that Needle-needle and Bolingbroke are almost as extensive as the New Moynar Company's estates, and if anything, with more reef, and also having fine water courses.

Richmond, 15½ to 15¾; the usual telegram from the mines at Eureka, Nevada, states that the week's run was \$70,000, from 1200 tons of ore. During the week the refinery produced doré bars to the value of \$50,000. The manager (July 21) reports upon the value of the operation. The 600 north, from No. 14 chute, has various points of operation. The 600 north, from No. 14 chute, has been advanced 18 ft. in very favourable looking ground for ore; the present end is in ledge matter, with stones of galena, which are present indications for finding a chamber of ore. The 700, south-east from the winze, has been extended 11 ft. in good-looking ground. The 700, east from the winze, has been advanced 6 ft. in good-looking ground. The slope below the 700 is not looking so well as it has been; there is still ore being extracted, but it is small. The other chambers are without any material change since last report. The furnaces have not been doing quite so well for the past week on account of lack of blast; they are now doing better, and hope to have fair returns for this week.

Ruby and Dunderberg, 7½ to 7¾; the reports published this week are considered to exhibit a marked improvement. The developments are opening up large reserves of rich ore; and so established is the position of the Dunderberg for ore producing, it has been determined by the directors to put their furnaces in blast. A smelter has been secured, and sails in a few days for Eureka. Up to the present sales have been made of the ore just as it is raised, and on this mode of operation upwards of 20000 lb. per month in net profits are being realised, and this while the main object has been opening up the mines and discovering ores, not in taking the same away. The management at Eureka have recommended the sinking of the shaft below the 500 ft. level to come under the discoveries now made, and it has been resolved to adopt the recommendation and to commence sinking on Sept. 1. The telegraphic advices to hand announce the important fact that the recent discovery in the 500 ft. level is parallel to that now working, and the end is in solid ore. A cross-cut at the 300 ft. level, towards the Home Ticket, is being driven, and is an important point.

Flagstaff, ½ to ¾; the petitions have been paid, but the order to wind-up remains undischarged. It is stated that a scheme for a new company has been prepared by Mr. Pearson, specially for the benefit of the old shareholders—to whom the mines will be by this plan exclusively offered at a moderate price—and that it appears deserving of careful consideration.

Kapanga, ½ to ¾; the news by last mail continues satisfactory. Fair progress is making in pumping, and matters are in a forward state for resuming working.

Missouri, 10½ to 11; the advices received this week briefly report that work throughout the mines is going on regularly. The St. Clair shaft is being sunk as rapidly as possible to the next level, and operations are being pushed forward at Bald Hill. The furnaces continue to work satisfactorily. Full report is promised by next mail.

In Hydraulic, or Gold Washing Company's shares, there has been very little doing, but business is reported in Blue Tent, which are quoted 2 to 2½, and Birdseye Creek at ½ to 1. At the Oregon Company's mines the clean-up for June amounts to about \$3700. Up to date of last advice water continues to be fairly plentiful.

In Lead Mine shares the improvement noticed last week has been fully maintained and the prominent mines of this class appear to be making good progress. Van, 19 to 20, and enquired for; the bottom levels continue to look much the same as last reported and all matters are going on satisfactorily.

Frongoch, 3 to 3½, cum div.: the directors having had the books audited up to the end of June have declared an interim dividend at the rate of 10 per cent. per annum, and the warrants were posted yesterday. It is stated that the amount of profit carried forward after making this distribution is sufficient to pay a further dividend of like amount. The accounts from the mine continue to be satisfactory in all respects, as will be seen from the monthly report published in another column. Grogwinion, 2½ to 3½, ex div.: the dividend to the end of June was paid on Wednesday. The monthly report states that the usual satisfactory progress is making at the mine, and that the sinking of the new shaft is turning out altogether more productive than was expected.

New Wye Valley, 1½ to 1¾. The new shaft being now completed, operations have been resumed at the bottom level, and some capital progress has been made. A cross-cut has been started to prove the width of the lode, and is now in 9 ft. Some very good lead ground has been passed through, and the lode is likely to prove very rich. Other parts of the mine have considerably improved, and especially in the neighbourhood of Tippet's shaft.

Ystwith, 1 to 1½; the works at all points continue to make capital progress. The new shaft is being sunk rapidly, and as depth is attained the lode is found very firm, well-defined, and large, and yields good lead ore. In other parts of the mine equally satisfactory progress is being made, and prospects are exceedingly promising. Crosswood, 1 to 1½; the works at Pantehirion are giving very good results. The sinking of the shaft has been commenced, and so far every indication indicates the probability of good discoveries being soon made.

Caron, 1½ to 2; the shaft is now down 12 fms. below the 22, and a new level will soon be commenced. The 22 is now approaching a point under where a very good discovery was made in the level above, and a good deal of interest attaches to the realisation of this point. Red Rock, 1½ to 2; the manager's report is satisfactory; the mine is now improving again after the recent falling off, and a considerable parcel of gold is being got ready for market.

TRAMWAYS.—The closing prices of this evening, as quoted by Mr. W. ABBOTT, of Tokenhouse-yard, are given in tabular form in the last page of the Journal.

INSURANCE SHARES have, according to this evening's report of Mr. W. L. WEBB, of the Stock Exchange and Finch-lane, been dealt in as follows:—Alliance, British and Foreign, 33½ to 34; Commercial Union, 20 to 20½; Eagle, 5½ to 5¾; Guardian, 68½ to 69; Fire Insurance, 2½ to 3; London, 64½ to 65; London and Lancashire, 69½ to 70; Liverpool and London Fire and Life, 17½ to 17¾; London and Provincial Marine, 4½ to 4¾; Marine, 89 to 90; Railway Passengers, 7½ to 7¾; Rock, 8 to 8½; Royal Exchange, 395 to 398; Thames and Mersey, 10½. Insurances steady. For closing prices see list on last page of Journal.

GAS SHARES.—The principal business in these shares, according to this evening's report of Mr. W. L. WEBB, of the Stock Exchange and Finch-lane, has been in Bombay, 6 to 6½; Commercial, 195 to 196½; Continental Union, 20½ to 21½; 7 per cent. pref., 24½ to 25; European, new, 14½ ex div.; Gaslight, A, 168½ to 169½; 7 per cent. max., 137 to 137½; 4 per cent. debenture, 104 to 104½; Imperial Continental, 189 to 194½; London, 185 to 186½; Monte Video, 17½ to 18½; Rio de Janeiro, 28 to 28½. Gas stocks continue very good, and enquired for. For closing prices see list on last page of Journal.

The subscription list for the Five per Cent. Perpetual Preference shares of the West Lancashire Railway Company will close on Aug. 16.

The Union Pacific Railroad Company notify the numbers of 136 sinking fund mortgage bonds that have been drawn for redemption on Sept. 1.

Mr. Courtney, M.P., and Mr. Alexander Gavin Anderson (Anderson, Anderson, and Co.), have joined the London board of the Colonial Bank of New Zealand.

The creditors of the Longton Hall Hotel Company (Limited) are to send in their claims by Sept. 1; those of Faulkner, Taylor, and Co. (Limited) by Sept. 15; those of the International Trading Company (Limited) by Oct. 1.

The annual report, to June 30, of Samuel Fox and Co. (Limited) shows a profit, including the balance brought forward, of 27,707L, from which the directors recommend a dividend at the rate of 10 per cent. per annum, free of income tax, leaving 3707L, to be carried forward.

The Flagstaff Silver Mining Company of Utah (Limited) announce that the petitions presented for the winding-up of the company have been disposed of, two of the petitions being paid their claims on July 31, and the third and last one was settled with yesterday.

Messrs. FIDLEY and ABELL.—GOLD: There has not been quite so good a demand for gold for export since our last, and the Bank has received 146,000L, since the 5th inst., the bulk of which consisted of sovereigns from Australia: 50,000L (sovereigns) were withdrawn yesterday for Canada, and the enquiry for the States is likely to be more active, as the exchange is dropping. The Orient line Company has brought 142,410L, from Australia and the Nepal 3345L, from India. The Indus takes 25,400L, to Bombay.—SILVER: The rate has declined since our last circular, and bars have changed hands at 52½d. per oz. Austrian florins continued to be shipped. These transactions have now, however, ceased, owing to the recent movement in the exchanges at Vienna. The arrivals comprise 8000L, from Melbourne and about 24,000L, from America. The P. and O. steamer has taken 66,300L, to Bombay.

EAST BOTALLACK.—The committee of management have received gratifying reports as to the position and prospects of the mines. Good stones of tin have been brought from the adit level, and samples have been sent for assay. The progress of the mine is in all respects satisfactory.

Rich discoveries of silver have been made in the Osogooos country in British Columbia. In one mine the ore assays from \$60 to \$1500 and in two others \$1200 to \$3000 per ton at the outcrop of the lode

With this week's Journal a SUPPLEMENTAL SHEET is given, which contains—Original Correspondence: Employers' Liability (C. Markham); Miners' Safety-Lamps; the Prevention of Colliery Explosions; Gold in Wales—No. XXVIII. (T. A. Readwin); Utilising Waste Heat from Metallurgical Processes; Indian Gold Mines; the Gold Ranges of Venezuela (Somers and Co.); Mining in Canada—the Acton Mine; Lead Trade; Mining in the St. Agnes District; Our Mineral Deposits—How to Find Them (C. Rowe); Gwynnapp as a Copper-producing Parish (R. Symons); Shropshire Mining—the Roman Boundary Mine; the Mona Mine; Devon Copper and Blende Company; Mining in Cardiganshire; Cardiganshire Mines (C. Williams). Foreign Mining and Metallurgy. Sapphire Mines of Siam. Novel Experiment at Walsall. Reports from Cornwall, North and South Staffordshire, Tyne and Wear, Forest of Dean, Derbyshire and Yorkshire, Nottinghamshire, and North Wales, Salep, and Cardigan. Practical Mining—Spray Ventilation. Registration of New Companies. Meetings of Public Companies: Cesena Sulphur, English and Australian Copper, Aruba Island Gold, Pateley Bridge, and South Condurrow Mining Company. Puddling and Heating Furnaces. Clausthal Mining School Notes—No. CLX. Explorers' and Assayers' Companion, &c.

BRAZILIAN GOLD MINES.—The company's agents in Rio have informed the directors (per cablegram) that the estate with its mines have been legally transferred, and active mining operations commenced. An efficient staff of European miners has been engaged in Brazil, saving a considerable sum of money and (what is of great importance) no inconsiderable time. Besides these considerations, the labour the company has been fortunate enough to secure is acclimatised and well skilled in the work in which they are now employed; therefore, basing an opinion upon the exceptionally favourable original reports, we may look for some brilliant results in the immediate future.

GOLD IN WALES.—The Royal Mines (Merioneth) Minerals and Metals Association has been privately formed by influential parties, and it is intended at the Tyddingwladis Works, up the Mawddach Valley, to commence at once, under the direction of Mr. Readwin, the treatment of 500 or 1000 tons of auro-pyritous minerals by the new methods he proposes, in order to determine finally whether, as he concludes his interesting letter in the *Mining Journal* of July 31, "the circumstances of Welsh gold are under control, and whether the lode itself generally is remuneratively auriferous." Mr. Readwin, who is an old and esteemed correspondent of the *Mining Journal*, may well be congratulated upon this determination to bring about what he has for many years so ardently desired, in the face of what appeared to be insurmountable difficulties. It is sincerely to be hoped that, after his indomitable perseverance, he will at last be amply rewarded. It is scarcely necessary to remind readers that if, after a working trial of 500 tons or so, Mr. Readwin's methods of operation be proved successful, a satisfactory future will certainly dawn upon Merionethshire mining, and very far beyond that interesting county.

NORTHERN LEAD MINING COMPANY.—The necessary preliminaries having been completed, this company has now taken over the Rookhope Mine, and operations will be pushed on vigorously. There is a large quantity of ore ground available for tributing and two pitches have already been let at prices leaving a good margin of profit. As men are obtained more bargains will be let, and meanwhile the driving of the 42, left incomplete by the old (Rookhope Lead) company, will be resumed, and the cross-cuts to prove the side lodes will be put out as rapidly as possible.

DERWENT.—Progress in the rise above the 93 on the north vein is slow owing to the hard nature of the ground, but the vein is gradually improving as it gets into the great limestone, and nice samples of ore are being found. It will be remembered that the cross-cut was driven for expedition in the unproductive sill below the great limestone, and that on the lode being met a rise was commenced to follow the vein into ore-bearing sills. The indications give every reason to expect a good deposit of ore, not only in the great limestone, but in the coal and little limestone sills, in which the lode is untouched.

LADY ASHBURTON.—A valuable discovery has been made at this mine. In cutting through the lode at the bottom of the engine-shaft, only 15 fathoms from surface, a leader of silver near the north or foot-wall has produced on assay 846 ozs. of silver to the ton, as proved by Professor F. Claudet, Assayer to the Bank of England.

#### TC INVESTORS IN MINING.

A SCIENTIFIC MINING ENGINEER AND GEOLOGIST (of Thirty Years practical experience) is OPEN to INSPECT MINING PROPERTIES, and GIVE BONA FIDE and RELIABLE OPINION, or REPORT, upon reasonable terms. Apply to "Mining Engineer," Somerset Chambers, Corn-street, Bristol.

WANTED TO PURCHASE, SIX THOUSAND SHARES in the DEVON COPPER AND BLENDE COMPANY, at 2s. per share, cash. Address, "S," 7, Ethelbert-terrace, Cliftonville, Margate.

WANTED TO PURCHASE PRIVATELY, SHARES in the EBERHARDT and AUBORA and CONSOLIDATED MINES. State lowest price to "A. M.," MINING JOURNAL Office, 26, Fleet-street, E.C.

FOR SALE, a FIRST-CLASS SECOND-HAND 80 in. CORNISH PUMPING ENGINE, with several 11 ton BOILERS. Apply, Wm. BENNETTS, Roskear, Camborne.

"THE MINING ENGINEER," a guide to investors, exhibiting an outline of general facts relating to mines and mining. Two Shillings and Sixpence per annum, single copies 2½d., post free. Published monthly by Messrs. JAMES and CO., Western Mining Offices, Grampound-road, Cornwall.

THE NEW PENROSE TIN AND COPPER MINE.—A FEW SHARES FOR SALE in this mine at par, 20s. each. See report. Apply to the Secretaries, Messrs. THOMPSON and SON, 14, Old Town-street, Plymouth.

THE FORTESCUE (STANAGWYN) MINE.—These SHARES are recommended for an immediate RISE IN VALUE. Full particulars of the Secretaries, Messrs. THOMPSON and SON, 14, Old Town-street, Plymouth.

THE OAKHAMPTON LIME AND CEMENT QUARRIES COMPANY (LIMITED).—SYNDICATE SHARES, £25 each, to be SUBDIVIDED into ONE HUNDRED SHARES of 20s. each, fully paid. This is a fine property, and will pay at least 25 per cent. See prospectus. Messrs. THOMPSON and SON, Secretaries, 14, Old Town-street, Plymouth.

SAFE INVESTMENT FOR CAPITAL.

MR. THORMAN WOODWARD, MINING OFFICES, TRURO. Has BUSINESS in the following SHARES, which are strongly recommended for immediate purchase as being honestly won present prices, and likely to have an advance from 100 to 500 per cent., besides the dividends:—EAST POOL..... £37 0 0 WHEAL UNION ..... £2 5 0 NORTH BUSY..... 2 15 0 PEDN-AN-DREA ..... 0 17 6 WEST PEEVOR..... 10 5 0 WEST TOLGUS..... 53 0 0

VALUABLE COLLIERY FOR SALE IN YORKSHIRE, working the well-known BARNSELY THICK COAL. Apply, J. and P. HIGSON, 18, Booth-street, Manchester.

EDWARD HORSWILL, ACCOUNTANT, AUDITOR, STOCK AND SHARE BROKER. SALES AND PURCHASES OF SHARES EFFECTED AT THE CLOSEST MARKET PRICES.

ADDRESS 3, CHAPEL STREET, TAVISTOCK. GLASGOW AND THE HIGHLANDS.

ROYAL ROUTE VIA CRINAN AND CALEDONIAN CANALS by Royal Mail Steamer, COLUMBA or IONA, from Bridge Wharf daily, at Seven A.M., and from Greenock at Nine A.M., conveying PASSENGERS for OBER, NORTH and WEST HIGHLANDS. Official Guide Book, 2d.; illustrated copy, 6d.—see bill, with Map and Tourist card, free, at Messrs. GORDON and WINDUP, Publishers, 214, Piccadilly, London; by post from the Owner, DAVID MACBRAYNE, 119, Hope-street, Glasgow.

CAPPER PASS AND SON, BRISTOL, ARE BUYERS OF LEAD ASHES SULPHATE OF LEAD, LEA SLAGS, ANTIMONIAL LEAD, COPPER MATTE, TIN ASHES, &c and DROSS or ORES containing COPPER, LEAD, AND ANTIMONY.

HENRY NUTT AND CO., 57, BRISTOL ROAD, BIRMINGHAM PURCHASERS OF LEAD ASHES, LEAD SLAGS, SULPHATE OF LEAD, TIN ASHES, TERNE ASHES, AND ALL REFUSE CONTAINING TIN AND LEAD.

GEO. G. BLACKWELL, 26 CHAPEL STREET, LIVERPOOL, PURCHASER OF MANGANESE, ARSENIC, FLUOR-SPAR, WOLFRAM, BLENDE, CALAMINE, CARBONATE AND SULPHATE OF BARYTES, ANTIMONY ORE, CHROME ORE, MAGNESITE, EMERY STONE, PUMICE STONE, COHRES AND UMBERS, CHINA CLAY, LEAD ORE FOR POTTERS, TALC, PHOSPHATE OF LIME, &c.

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PLOMBET ZINC. PROPRIETAIRES CONCESSION INTACTE, BORDS MEUSE, BELGIQUE, PRES STATIONS CHEMIN FER, NAMUR-LIEGE, DESIRE FORMER SOCIETE ANONYME. Adresse, HUBEAUX, à Louvain, Belgique.

C. H. WALKER AND CO., MINING AGENTS AND ENGINEER, VALPARAISO AND SANTIAGO, CHILE.

PATENT TRUCK WINCHES, HAULING ENGINES, &c., for over and underground purposes. Worked with air or steam. Strong, simple, and effective.

A. HIGGINSON AND CO., 56, TOWER BUILDINGS, E., LIVERPOOL, W.

FIVE PER CENT. PERPETUAL PREFERENCE SHARES. WEST LANCASHIRE RAILWAY COMPANY.—Notice is hereby given, that the SUBSCRIPTION LIST for the Five per Cent. Perpetual Preference Shares of the above Company will CLOSE on MONDAY next, the 16th instant.

By order, THOS. GILBERT, Secretary. Offices: Windsor Road Station, Southport, and 31, Lombard-street, London, E.C.

THE PESTARENA UNITED GOLD MINING COMPANY (LIMITED). The COUPON NO. 3, of the SECOND MORTGAGE DEBENTURE BONDS of this company, will be PAID on presentation at the office, No. 5, Queen-street-place, E.C., on or after MONDAY next, the 16th August. RICHARD GARLAND, Secretary. 13th August, 1880.

THE GROGWINION LEAD MINING COMPANY (LIMITED). Notice is hereby given, that the NINTH HALF-YEARLY DIVIDEND, at the rate of SEVEN AND A HALF PER CENT. per annum, is NOW PAYABLE at the Company's Bankers, the Alliance Bank (Limited). By Order, GEO. BEDFORD, Secretary. 26, Change-alley, Lombard-street, August 11, 1880.

FRONGOCH MINE (LIMITED). Notice is hereby given, that an INTERIM DIVIDEND, at the rate of TEN PER CENT. per annum, is NOW PAYABLE at the Company's Bankers, the Alliance Bank (Limited). 26, Change-alley, Lombard-street, August 13, 1880.

THE CAMBRIAN MINING COMPANY (LIMITED). Notice is hereby given, that the FOURTH ORDINARY GENERAL MEETING of the shareholders of this company will be HELD at the offices of the company, 48 and 49, Palmerston Buildings, Old Broad Street, London, on WEDNESDAY, the 18th day of August, 1880, at Twelve o'clock noon, when the report of the directors and the accounts will be submitted to the meeting for its adoption. Dated the 6th of August, 1880. GEORGE H. KEENE, Managing Director.

WESTERN ANDES MINING COMPANY (LIMITED). Notice is hereby given, that an EXTRAORDINARY GENERAL MEETING of the company will be HELD at the offices of the company, 28, King-street, Cheapside, on WEDNESDAY, the 18th August instant, at Three o'clock precisely, for the purpose of receiving the directors' report and statement of accounts, for the declaration of a dividend, and the re-election of directors and auditors. By order, THOMAS JERVIS, Secretary. Dated this 10th day of August, 1880.

MINING "E L C A L L A O," GUAYANA, VENEZUELA. COUPONS OF SHARES ..... 322 Gold in bars produced in the months of March to June, 1880, remitted to Messrs. Baring Brothers and Co., London:—March ..... Ozs. 3,952.72 Dividend per coupon... \$100 April ..... 4,571.99 " " " " 100 May ..... 3,869.18 " " " " 100 June ..... 3,944.60 " " " " 100 Ozs. 16,338.49 For each coupon ..... \$400 The Treasurer of the Company, G. BARNEWITZ. The President of the Company, A. SICCIONI.

PIT SINKING, WINDING COAL, PUMPING, &c. PORTABLE STEAM ENGINE FOR SALE, with two 13½-inch cylinders, fitted with link-motion reversing gear, large boiler, with or without road travelling wheels, and winding and pumping gear. Also a double 9½-in. cylinder PORTABLE ENGINE. A 9½-in. cylinder VERTICAL ENGINE, with winding drum, complete. An 8-in. cylinder VERTICAL HOISTING ENGINE, with winding drum complete. To be seen at—BARROWS AND STEWART'S WORKS RANBURY, OXON.

SURVEYS, VALUATIONS, PLANS, &c., &c., of MINERAL and other PROPERTIES executed on the shortest notice. ERECTION OF PUMPING, WINDING, and LEAD-DRESSING MACHINERY on the most approved principles. SPECIAL "LEWING" MACHINES, &c. Specifications, estimates, &c., carefully considered, by ALFRED WILLIAMS, C.E., Greenfield, Van Lead Mines, Llanidloes, and Amwlwch, Anglesea.

INVESTMENTS AND SPECULATIONS—IMPORTANT TO ALL INVESTORS.

THE AUGUST NUMBER OF "SOW AND REAP" contains interesting information on the Present State of Trade, the Metal Trade, the Investment Market, Gold Mining in India a Myth, Financial Review, Special Recommendations, High Premiums on Bad Securities, and other information. Sent post free for 1½d. stamps by Messrs. THOMPSON and SON, 14, Old Town-street, Plymouth.



### Notices to Correspondents.

\* Much inconvenience having arisen in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be filed on receipt; it then forms an accumulating useful work of reference.

**GEOLOGICAL SOCIETY.**—"W. P." (City).—The mode of procuring admission as "F.G.S." is similar to that for securing the fellowship of any other learned society. The candidate must send in to the secretary a formal petition or request to be admitted, signed by himself, and recommended by the counter-signatures of three Fellows of the Society—one of whom must know the candidate personally, the others generally. No one since about 1840 has been asked by any official of the society to consent to nomination. The usual complaint in the Geological, Geographical, Chemical, and indeed all learned societies, is not that eligible candidates are rejected, but that ignorant and objectionable candidates sometimes escape blackballing because utterly unknown to any Fellow present at the ballot, or from the disinclination of those voting to expose the carelessness of the recommending Fellows, who have frequently been themselves deceived.

**EXPLORERS', MINERS', AND METALLURGISTS' COMPANION.**—"N. N." (City).—The second edition is still in print, and can be obtained for \$10.50, or 2l. 2s. of Mr. H. A. Phillips, of Beverley, New Jersey, U.S.A., or by order through Messrs. Trubner and Co., of Ludgate Hill, London; but it will be seen from a notice in another column that the author, Mr. J. S. Phillips, M.E., who is at present at Independence, Inyo County, California, has just completed a third edition, in which the information is revised and brought down to the present time. The first volume only is yet ready, and costs 1l. 10s.; it may be assumed that the other will be about the same price.

**PRACTICAL MINING—DRIVING LEVELS.**—"H. J." (Redruth).—If, as you state, it be important to avoid removing an inch more ground than necessary owing to its extreme hardness, and the ground stands well without timbering, there is no necessity to square up the top of the level, and you would no doubt get "a good level equal for all practical purposes to a level 6 ft. 6 in. by 4 ft., by carrying up the sides 4 ft. 6 in. straight, and making the roof semicircular from the top thereof." There would be about 10 per cent., or 2 ft., less friction surface—about 19 ft. instead of 21 ft. The difference of the quantity of air passing through would be scarcely worth consideration in a metalliferous mine, and only in exceptional cases in a colliery.

**NATIONAL SOCIETY FOR THE WORKING OF MINES (Société Nationale d'Exploitations de Mines).**—"Dealer" (City).—The company was referred to in the *Mining Journal* of June 19, when it was announced that the prospectus would probably be issued the week following. It appears, however, that it was found impracticable to complete the necessary arrangements, some of those concerned considering it desirable that some of the company's mines which were ready for starting should be got to work before inviting subscriptions, and the necessary steps were at once taken to carry out this view. In the result the delay extended into the time when Paris is out of town, and thus the issue will probably be deferred until what the French financiers call "the next financial campaign" in October. In the meantime the interests of the society have not been neglected; one of the chief directors is visiting the principal properties, and already eight or ten of the mines and works have been got into full operation, so that if "Dealer's" client waits for the prospectus he will probably find that it has lost nothing by the delay. It will be advertised in the *Journal* as soon as issued in France.

**Received.**—"E. H. and Co." (New York).—"G. E." (Paris).—"S. D. N."—"W. M."—"T. R."—"D. S."—"M. N."—"Shareholder" (Wheal Grenville).—"G. R."—"Shall be glad to hear again."—"T. H."—"J. R. P." (Stonehouse).—"F. K."—"D. D."—"J. W. P." (Brussels).—"W. K."—"E. S."—"Member."—"J. A. E." (Mining in Lanarmon). Next week—"H. C. B." (Miners' Safety-Lamps). Next week—"Shareholder" (Bristol). A report of the meeting appears in this week's *Journal*.—"Old Correspondent" (Dublin). The matter appears to be in abeyance. We shall be sure to hear of it shortly.

## THE MINING JOURNAL,

### Railway and Commercial Gazette.

LONDON, AUGUST 14, 1880.

#### THE EMPLOYERS' LIABILITY BILL.

That the Bill bearing this title is in a high degree objectionable, and is likely to prove of little if any advantage to workmen, whilst it will subject employers to constant annoyance, and benefit none but the less scrupulous class of lawyers, has already been urged in the *Mining Journal*, and no arguments have yet been brought forward calculated to disturb that view, but at the same time it would appear to be desirable that it should be permitted, by both Lords and Commons, to pass in its present form rather than that a measure which is supposed from its title to be a working man's measure should be thrown out for want of time at the end of a session. The workman and his representatives will certainly feel the evil of the Bill as soon as any, and it is very questionable whether employers would be wise in endeavouring to contract themselves out of the law so as to prevent the real effect upon both being ascertained as speedily as possible. It will be most convenient to consider first the provisions of the Bill, and then their probable effect.

The first section enacts that "where after the commencement of this Act personal injury is caused to a workman—1. By reason of any defect in the ways, works, machinery, plant, or stock-in-trade connected with the business of the employer.—2. By reason of the negligence of any person in the service of the employer whilst in the exercise of the superintendence entrusted to him.—3. By reason of the negligence of any person in the service of the employer to whose orders or directions the workman at the time of the injury was bound to conform, and did conform, where such injury resulted from his having so conformed.—4. By reason of the act or omission of any person in the service of the employer done or made in obedience to the rules or bye-laws of the employer, or in obedience to particular instructions given by any person delegated with the authority of the employer in that behalf, the workman, or in case the injury results in death, the legal personal representatives of the workman; and in Scotland any persons entitled in case of death shall have the same right of compensation and remedies against the employer as if the workman had not been a workman of nor in the service of the employer, nor engaged in his work."

That these provisions were far too wide was obvious, for even those least acquainted with business readily saw that it would practically involve the payment of compensation by the employer whenever and however a workman received injury—if two printers, one being a foreman, were lifting a forme and the workman damaged his fingers, the employers whether present or absent would have to compensate him. An attempt, therefore, has been made to remedy this evil by mending the second section a kind of bill of exceptions; it provides that "a workman shall not be entitled under this Act to any right of compensation or remedy against the employer in any of the following cases:—(1) Under sub-section one of section one, unless the defect therein mentioned arose from, or had not been discovered or remedied owing to the negligence of the employer, or of some person in the service of the employer, and entrusted by him with the duty of seeing that the ways, works, machinery, plant, or stock-in-trade were in proper condition. (2) Under sub-section four of section one, unless the injury resulted from some impropriety or defect in the rules, bye-laws, or instructions therein mentioned; provided that where a rule or bye-law has been approved or has been accepted as a proper rule or bye-law by one of Her Majesty's principal Secretaries of State, or by the Board of Trade, or any other department of the Government under or by virtue of any Act of Parliament, it shall not be deemed for the purposes of this Act to be an improper or defective rule or bye-law. (3) In any case where the workman knew of the defect or negligence which caused his injury, and failed within a reasonable time to give, or cause to be given, information thereof to the employer or some person superior to himself in the service of the employer, having no reasonable cause to believe that the employer or such superior were aware of the said defect or negligence."

Now, to any ordinary individual it would appear that both these intricate sections could have been advantageously replaced by one short section explaining the particular cases in which employers are to be liable; but as intelligence and perspicuity in the framing of Acts of Parliament would reduce litigation to one-half, and enable disputants to conduct their cases at one-tenth the present cost, legislators may consider any alterations undesirable. A very necessary limit of liability is also made in the third section, which enacts that "the amount of compensation recoverable under the Act shall not exceed such sum as may be found to be equivalent to the estimated earnings, during three years preceding the injury, of a person in the

same grade employed during those years in the like employment, and in the district in which the workman is employed at the time of the injury." There can be little doubt that this clause fairly applied will be of quite as much importance to the workman as to the employer. In the case of the industrious, steady workman, who has made full time during the three years, it will be quite justifiable to claim that men less sober and industrious are not of the same grade, whilst in the case of the inebriate and idle the employer would be equally justified in claiming that only those equally idle and inebriate should be regarded as of the same grade in estimating the amount of compensation to be awarded. This is the more important, because it is indisputable that many accidents are fairly attributable to the workman not being in a proper condition to perform the work required of him, although it would be difficult to prove that at the moment he was not sober. The remaining sections of the Bill may be regarded as professional clauses, relating principally to the mode of enforcing the provisions of the Bill, so that they need not here be discussed. It is stated that on the report of the Bill as amended the insertion of the insurance clause will be proposed by either Lord R. CHURCHILL or Mr. HUSSEY VIVIAN. Mr. S. MORLEY will move a new clause with the object of making railway companies liable for accidents to servants due to the negligence of servants in other departments.

It is not improbable that the objectionable character of the Bill has received less attention from many in consequence of the exaggerated statements made by many who are opposed to it. That it is opposed in principle to the ordinary laws of Great Britain is beyond question, but to suppose, as Mr. MARKHAM states in his letter published in another column, that it will ruin small contractors unless they contract themselves out of it, is probably going too far—all they will do is pay the workman a lower wage to compensate themselves for the extra liability placed upon them; indeed Mr. MARKHAM does not appear to exactly comprehend the principle upon which compensation for injury has hitherto been awarded, although Lord Justice BRAMWELL stated it most clearly in his letter already published in the *Mining Journal*. His lordship's statements now are equally clear with regard to railway companies, and considering his position, reputation, and experience, we should be unjustified in supposing that his views are legally wrong. He states that he thinks he is right in saying that railway companies have no right to complain of having to pay damages to their passengers if injured by negligence. No doubt they would not contract to do so now if they could help it; but they voluntarily contracted so to do when they took their powers and rights from the Legislature. Whether it is wise or right that their powers should be granted on those terms is another matter. It is also another and very different matter whether they have justice done them in relation to the contract to carry safely. He quite agrees that they are fixed with liability very often most unjustly; and in such a case as that put. He has used this illustration:—A man hits the target 99 times in 100; the hundredth time he fires wide of it. Is the legitimate conclusion that he is a bad shot, or that he was careless in his last firing? Neither. Yet when the driver overshoots the platform once in a thousand times, there is evidence of negligence, and the company is fined. I quite agree also that anomalies exist in the law on this head. The only remedy is what you suggest—viz., to make people liable only when they are to blame themselves.

Well may Lord Justice BRAMWELL view the proposed law with alarm, and he adds that he does not think it can be called an evasion of it to agree with your workmen that you shall not be liable to them. The law, when passed, will mean "In the absence of express agreement to the contrary, it shall be taken that the contract of master and servant involves liability for a fellow-servant's negligence." He declares he thinks this need trouble no conscience. Take a case of tenancy. The law says that in a tenancy from year to year six months is the right notice, unless the parties agree for another period. There is no evasion of any law if they do so agree. So of numberless other cases. He thinks the proposed law will produce litigation, quarrels, ill-will, fraud, and other mischiefs among them, probably the discontinuance of such useful institutions as accidental funds. Such being his lordship's views, it will, to say the least, be wise to endeavour to avoid the evils he anticipates, but at the same time one cannot help thinking that it would be still wiser to let the Bill pass in its present form and await the experience of its objectionable character, which will inevitably lead to its speedy repeal, and most likely at the expressed desire of the workmen themselves.

#### MINING LEGISLATION.

There is no interest that has been so much and so frequently harrassed by legislation as mining. Scarcely a session is allowed to pass without some attempt being made by the representatives of the miners to obtain some new enactment prejudicial to mineowners, and agitators find no difficulty in airing their assumed grievances before the Government officials, and obtaining the support of a few Members of Parliament of a philanthropic turn of mind, but without much practical knowledge of business. Even at this late period of the session we find that on Friday last a deputation from the National Association of Miners waited upon Sir W. HARCOURT, the Home Secretary, at the Home Office, for the purpose of laying before the department their views with regard to various questions discussed at the National Conference held in Manchester in December last. The deputation, we are told, represented over 400,000 miners, which we believe is about twice the number belonging to all the associations in the kingdom.

The deputation pointed out that the inspection as now carried on was not sufficient to ensure necessary precaution in mines. This, of course, is one of the old grievances, merely repeating the desire made many years ago that there should be more inspectors, who should visit and examine the working places, roads, &c. This would be a great hindrance to work generally, and could not give increased safety to the workmen, for an inspector could not be kept constantly at one place, nor would it be advisable that he should be constantly interfering with the operations going on. There was one proposal made, however, of a somewhat startling character. It was that, instead of the power to prosecute as directed by the Mines Act being exclusively in the hands of the Home Secretary, it should be granted to a common informer. This is certainly a new proposition, and anything but creditable to the person who initiated it; it shows how fertile is the imagination of some persons for showing how the greatest possible amount of annoyance could be secured for a person who was an employer of labour. Now, were an informer to be employed to visit constantly the various workings of a mine so as to see and prosecute workmen who were guilty of a breach of the rules or bye-laws we fancy the men would quickly rebel against such an un-English and inquisitorial proceeding, and that the informer would soon be placed in a position that would prevent him from following his contemptible occupation for a long time. But it is to be assumed that in some mines, so far as the owner was concerned, there would not be one informer, but 40, 50, or more, so that there would be a constant look-out for any trifling lapses on the part of the employer or his officials. We do not for a moment believe that such a proposal would receive the sanction of the majority of the miners of the country, who like straightforward fair play. But such a proposition would never be agreed to in the House of Commons or the House of Lords, and that the person who brought it forward must have well known at the time. As to the prohibition of gunpowder in mines, or in parts of mines separately ventilated, where gas was known to exist, that is a matter on which most of our Inspectors, as well as the Home Secretary are agreed.

Blasting has had a great deal to do with many of our most serious explosions, and should only be tolerated in mines where little or no gas was met with, and even then under certain conditions, for fire-damp suddenly makes its appearance in mines that have been free from it. The deputation also asked that workmen examining mines under the 30th general rule of the Mines Regulation Act should not relieve the owners of any responsibility whatever. According to our reading of the 30th rule, the inspection by workmen does not relieve the employer in any way, for it simply says, "The persons employed in a mine may from time to time appoint two of their number to inspect the mine at their own cost." The introduction of such a matter appears to have been superfluous as it was unnecessary. Then

it was requested by the deputation that the general question of penalties ought to be further considered. To any impartial person penalties are all on one side, and in common fairness were they to be considered it should be with a view to reduce them; but the reverse we need scarcely say was the desire of the gentlemen who brought the point for the consideration of the Home Secretary. It was then asked that the miners should have the power to appoint any person as check weighman. At present he has to be a person who has been working in or about the mines, so that there does not appear to be any grievance with respect to the appointment of the men's weighman. The last Mines Act added to the cost of raising coal, and any further legislation, such as is sought for by the deputation of Friday last, would still further enhance the cost, to the loss of both masters and workmen. But we quite agree with the remarks that fell from Sir W. HARCOURT in reply to the deputation, that whilst on the one hand they should do nothing to cripple the great mining industry, all necessary security should be taken with regard to the lives of those men who were engaged in that hazardous trade.

#### THE VIEILLE MONTAGNE COMPANY.

The important and old-established concern known as the Vieille Montagne Zinc Mines and Foundries Company has acquired another 12 months' experience, and has communicated the general results to the shareholders with its usual minuteness and lucidity. In the spring of 1879 the directors called attention to the low rates prevailing for zinc and lead, and expressed a hope that better prices would shortly be obtained. So far as the results of the past year's working were concerned the hope was not fully realised, prices having fallen at the close of last summer to a level hitherto unknown in the annals of the trade. Under these circumstances the proprietors of mines could not carry on their operations except at a loss, while the proprietors of foundries similar to those worked by the company were obliged also to resign themselves to the loss of almost all profit. As the autumn of 1879 advanced, however, an improvement happily took place in consequence of the general revival in business affairs, aided by some prudential measures adopted by common consent among the principal Belgian, French, and German producers of zinc. First zinc and then lead returned to something like their normal prices, and the favourable sales of the second half of 1879 attenuated in some measure the bad results of the company's working during the first seven months of the year. The final outcome of the company's operations in 1879 was a rough profit of 121,187l. This profit was 22,325l. less than that realised for 1878; but the directors were, nevertheless, enabled, after applying 44,457l. to reserve and sinking fund accounts to propose the distribution of a dividend equal to that paid for 1878—12s. per tenth share. The directors add that the condition of the company's principal establishments continues satisfactory, and that the diminution which occurred last year in its profits arose entirely from what it may be hoped were only temporary circumstances.

The general production of the company's zinc mines last year was 65,839 tons, as compared with 75,955 tons in 1878. The production of galena effected by the company also declined to 5907 tons last year, as compared with 6499 tons in 1878. The reduction in the production indicated by these figures was effected voluntarily by the Sardinian and Algerian agencies, as in consequence of the low strength of the minerals obtained in those countries, and the difficulties attending their working, they do not yield any profit when prices fall below a certain point. The object of the company in reducing its production was, in fact, to attenuate the difference between the depreciated value of the products obtained and the working expenses, which remained substantially at the same point. Notwithstanding the policy of prudence thus pursued by the company the Iglesias workings involved a loss of 6774l. for the year. This loss was at once provided for, in accordance with the rigidly correct system of finance adopted by the company, by its being debited to the general revenue account. Irrespective of the mineral groups just mentioned the company's centres of production at Moresnet, at Rensberg, and in Sweden continued last year to furnish the undertaking, with the same regularity and under the same advantageous conditions of cost price as hitherto, with the important quantities of minerals which serve as the basis of its manufactures. Important transformation operations are being carried on in connection with the working of the Baldas-Latore Colliery, the object being to raise coal at a level at which it can be extracted at a cheaper rate.

#### THE MANCHESTER GEOLOGICAL SOCIETY, AND SOUTH STAFFORDSHIRE INSTITUTE OF MINING ENGINEERS.

Last week an interesting excursion to the Nottingham and Sheffield coal districts was made by the members of the Manchester Geological Society and the South Staffordshire and East Worcestershire Institute of Mining Engineers. The members of the Manchester Society on Wednesday morning proceeded by train to Nottingham, where they were met by the South Staffordshire members, and the joint party, numbering between 50 and 60, then took conveyances to Messrs. C. SEELY and Co.'s Cinder Hill Colliery. Here they were met by the manager, Mr. GEO. FOWLER, and inspected his hydraulic apparatus for loading and unloading pit cages. The shaft at this colliery being small, the cages are only able to hold one tub on each of their three decks, which, of course, had considerably affected the rapidity with which coal could be wound from the pit. By means of the apparatus invented by Mr. FOWLER, which enables the three decks of the cage to be loaded and unloaded simultaneously, this difficulty had, however, been overcome, and the output from the colliery nearly doubled. Another matter which attracted the attention of the visitors was the large number of persons employed on the surface, but this it was discovered arose from the plan adopted at the colliery of separating the canal from the ordinary coal on the pit bank instead of in the workings, by which means a considerable saving in the cost of labour is effected. Bestwood Colliery, owned by the Bestwood Colliery Company, was next visited, and the party, who were met by the manager, Mr. ALLPORT, having been shown the plans at the offices, inspected the surface arrangements. The winding plant consisted of a double cylinder engine, 36 in., and 24 in. drum, which is condensed, the condensers being worked by separate engines. For ventilating purposes a Guibal fan, 46 ft. by 15 ft., is used, and this is worked by a pair of altered marine engines. Amongst the special features at this colliery is the system now being adopted of winding with a balance rope under the cage, a description of which was given some time back in the *Journal*, and with regard to which it is only now necessary to add that the object attained is the removal of the great weight of rope from the engine by balancing the cage and rope in the shaft, the actual load of coal being the only weight which the engine really has to raise. The system appeared to work most satisfactorily, the winding-engine when at three-quarter stroke being at full speed. The new winding-engines which are being erected by Messrs. NASMYTH, WILSON, and Co., of Manchester, on the KOEPE system, which consists in the rope simply passing round the drum as on a pulley, was also seen, and a number of the visitors then descended the shaft for the purpose of inspecting the longwall workings.

The party then returned to Nottingham, and in the evening Mr. HENRY JOHNSON, of Dudley, exhibited a number of fossils of crustacea and corals from the Silurian limestone, and coleoptera crustacea and fishes from the coal measures of the South Staffordshire coal field, which included some very rare and perfect specimens.

The following day—the members having proceeded to Sheffield by train the previous evening—the Nannery Colliery was visited, where the party was met by Mr. E. BAINBRIDGE. Here the surface arrangements, consisting of winding and other engines, washing machine and coke ovens, having been seen, a considerable number of the members descended the mine, where they examined the underground pumping engines, condensing hauling engines, and extensive haulage arrangements. A special train then conveyed the party to Hoyland Colliery, the property of Messrs. BIRD, WELLS, and Co., where they were met by Mr. JOHN HIGSON, the mining engineer. Here the SCHIELE fan, which seemed to give every satisfaction, working at a very small cost, was seen in operation, and the members



who descended the mine were struck with the immense pressure of the strata and the difficulties which have had to be overcome in working the seams. The Barrow Hematite Colliery, near Dorecliffe, was next visited, where the members inspected the magnificent arrangements made for winning and dealing with the coal on the surface. The COPPER COKE ovens were also an object of considerable interest, and were closely inspected by the visitors. This brought the round of visits to a close, and the party afterwards returned to Sheffield, where a dinner at the Victoria Hotel, followed by the usual complimentary toasts, terminated what had been a most enjoyable and instructive excursion.

#### THE DERBYSHIRE LEAD MINES.

The annual excursion of the Chesterfield and Derbyshire Institute of Mining, Mechanical, and Civil Engineers took place a few days since under the presidency of Lord EDWARD CAVENDISH, M.P. The principal visits made were to several of the best known lead mines in the county, especially to the Millicose Stoop, from which is drawn as much lead as from all the other mines now being worked in Derbyshire, and a description of which has appeared in the Journal. The extraordinary customs or rights as regards lead mining in the Peak and other districts we have before pointed out, and it is to them that must be attributed the small quantity of ore raised for the number of mines opened out, for men without capital are able to sink and carry on operations in the most primitive manner, without any machinery whatever. On the last day of the gathering Mr. STOKES, of Derby, Assistant Government Inspector of Mines for the district, read a most interesting and exhaustive paper on "Lead and Lead Mining in Derbyshire." The lead mines, it appears, became the property of the Crown at a very early period, and in the old Roman town of Wirksworth there was lead ore raised in 714, the dues going to support a nunnery at Repton, the abbess of which, it is said, sent a sarcophagus of lead to Croyland, in Lincolnshire, for the interment of St. Guthlac, a monk, the lead having been obtained from the Wirksworth Mines. Mr. STOKES showed from well-founded data that lead was raised in Derbyshire during the reigns of TIBERIUS CÆSAR, DOMITIAN CÆSAR, and HADRIAN in the early part of the Christian era. In 1469 the mineral duties north of the Trent were leased to RICHARD Earl of Warwick, and others for a term of 40 years. At the death of CHARLES II. the Dowager Queen CATHERINE had the mines of Derbyshire. About 70 years ago RICHARD ARKRIGHT, Esq., purchased the lease of mines from the ROLLS family, and it is still held by the descendant of the former. In the High Peak district since 1690 they have been held by the Dukes of DEVONSHIRE, having been leased from the Duchy of Lancaster. Some of the customs prevailing 200 to 300 years ago in connection with the mines were most peculiar, and we are told that whiskey was not allowed to be taken into a mine lest it should frighten away the ore. In relation to the Acts on mining passed in the reigns of EDWARD I. and VI., PHILIP and MARY, there is an old poem or rhyme, by MANLOVE, a local writer, who in allusion to them says:—

"For stealing ore twice from the mine,  
The thief that's taken fine twice shall be.  
But the third time that he commits such theft,  
Shall have a knife stuck through his hand to the hilt  
Into the stone, and there till death shall stand,  
Or lose himself by cutting loose his hand;  
And shall forswear the franchise of the mine,  
And always lose his freedom from that time."

As to the mode of smelting lead there are still standing records in what are known as the Bole Hills, the ancient smelting hearths being termed "boles," and consisting of loose stones built upon the brows of hills. Upon these rudely constructed hearths wood was laid, and over that again the ore was placed. Fire was then applied to the wood, and then the air at first was the only means of kindling the fire to the necessary heat to smelt the ore. After a time bellows were introduced, in some cases being so large they had to be worked by horses. For smelting it was a custom at one time to cut down anywhere within reach for the purpose, and one of the articles made at the Great Barmote Court, held in 1665, was—"We say that for the payment of the said lot miners within the Wapentake of Wirksworth ought to have liberty to work the ground within the Wapentake, and to have timber also in the king's wastes to work their ground withal, and egress and regress from the highway to their grooves and mines." The timber was not only used for smelting the ore, but it was also burnt for breaking down the sides of veins; and getting the mineral before blasting by gunpowder was employed in Derbyshire, as shown by another Court Article—"We say that any miner in an open rake may kindle and light his fire after 4 o'clock in the afternoon, giving his neighbour lawful warning thereof." This free use of timber in all probability was abandoned when the value and use of coal and gunpowder became known. Bole hills, however, are the most clearly defined geographical position of the ancient smelting hearth; but the word "Tor," of which there are many in Derbyshire, may also indicate a smelting place. The mining customs first received the Royal sanction from EDWARD I., after a petition from the miners had been presented to him, and an enquiry held at Ashbourne, in 1287, by the king's direction, by the Sheriff of Derbyshire. Those customs have been modified, and reduced to legal rights by Acts passed in 1851 and 1852, a summary of which have appeared in the Journal. The right of all persons to search for, dig, and sink mines on any person's land seems anything but right to the owner, who sees his land cut up, roads made across his fields, and water ingress and egress allowed to the miner. But, at the same time, it should be remembered that the miner had the same rights when the whole of the Peak was a "vast howling wilderness" without cultivation, and belonged to the Crown; also that the present owners bought the land subject to those privileges. There is little doubt that the mining rights at one time, as well as the income from the lead, were of more importance than the surface value—so that it was of advantage to the Crown that every encouragement should be given to the miners to pursue their calling. These customs once established have been clung to by the miners with the greatest tenacity, and have been fought for in the law courts, and, as they have been confirmed by the Acts of 1851 and 1852, both miners and landowners know the limit of their privileges as well as their inconveniences.

The system of royalties appears to differ in the various districts. The standard dish at the Moote Hall, Wirksworth, holds about 14 pints of water, and at the Peak the dish is equal to 15 pints of water. The royalty is called "lot," and is 1-13th part of the ore raised; but Mr. STOKES remarks that this royalty has been reduced, as being too high, and there is a movement now on foot to induce the Duke of DEVONSHIRE to still further reduce it. So far as information has been obtained the following is the "lot" taken by the various lessees:—Wirksworth, 1-13th to 1-25th is taken; Bonsall and Brassington, 1-13th; Cromford, 1-40th; Crich, 1-12th; Elton, 1-25th; Matlock, 1-13th to 1-25th; High Peak, 1-15th to 1-25th; Castleton, 1-25th; Winstar, 1-25th; Eyam and Stony Middleton, 1-13th; Harrington, 1-20th; Tideswell, 1-20th; Litton, 1-20th; Griff, 1-9th; a few other liberties, from 1-13th to 1-25th. The ore found includes galena, which usually consists of 85 parts of lead and 13 of sulphur, with a trace of silver; brown ore, or "linnets" as it is called by the miner, and white ore. Water has been the great enemy of the lead miner, the cracks and fissures in the limestone acting as channels to bring down the surface moisture. Brooks often descend from the fissures in what are called "swallows," and the course of some of the rivers is partly underground, descending a swallow at one point, and rising again to the surface some miles farther on. Hillcar Sough, which carries off the water at the rate of 15,000 gallons a minute, is 4 miles long, and cost 50,000l. The cost is repaid by the mines in the neighbourhood, which were unwatered by its agency under a system of tribute levied on their raisings. The Cromford Sough cost 30,000l.; Meek Sough, 45,000l.; Gate Sough, 30,000l.; and Stoke Hall Sough, 35,000l. It appears that the water from the Cromford Sough was used by the late Sir RICHARD ARKRIGHT to drive his celebrated cotton mill, and was afterwards used for the Cromford Canal; and, as the water is above the ordinary temperature, this has often prevented the canal from freezing. The whole of the lead ore, we are informed by Mr. STOKES, formerly went by water to Hull, and from a record obtained it appears that on April 16, 1400, a ship sailed with seven foddor of lead, in 90 pieces, worth 30l.; and on July 7 of

the same year another ship took four foddor of lead, in six pieces, worth 16l. From this it would seem that in 1400 lead would be worth about 4l. per ton. The Gregory Mine, near Ashover, produced 1511 tons of lead annually from 1758 to 1806, when it ceased working after producing a clear profit of 100,000l., and expending upwards of 23,000l. in prospecting for new veins. The Portaway Mine, near Winstar, about 1758 produced ore to the value of 4000l. in seven weeks. At the Hubbdale Mine, near Chelmorton (which is a pipe vein) about the year 1768 a lamp of galena was found which weighed nearly 10 tons. As to lead itself, Mr. STOKES remarks that some writers consider the veins to be a sedimentary deposit, slowly accumulating or growing similar to stalagmites; whilst others consider that the mineral has been thrown up from below, similar to all igneous rocks, filling fissures or cracks in the strata. Engineering skill and science have done little to improve the mode of working in the lead mines of Derbyshire, which in most instances is somewhat similar to what it was 100 years ago or more, or, indeed little better than it was in the old Saxon period. In the whole of the lead mining districts there are only two shafts where the ascent and descent are performed by mechanical means. In all the others ladders are used, or else a still more antiquated system, called "stemples" and "foot-holds." Stemples are hand and foot rests of wood, driven in horizontally in the shaft, up which the miner climbs by alternately stepping from one to the other, with the risk of being killed by falling to the bottom of the shaft should he miss his hold. In the large mines there are three classes of men employed underground—tutmen, tributers, and daymen. Tutmen work the levels, tributers work the ore after it has been proved by the levels; and where work is let by the fathom it is called tutwork. As showing the value formerly of some of the mines it is stated that in 1769 the viewers' tithes for the Wirksworth Mines alone were 1000l. per annum.

At the Millicose Mine, where the engines and machinery and all the appliances are of the best and most modern construction, the party was most hospitably entertained to luncheon by the owner, Mr. WASS, in a tent near to the mine.

#### THE DEEPEST MINING SHAFTS IN THE KINGDOM—ELECTRIC BLASTING.

Rosebridge Colliery, near Wigan, up to the present time has the deepest perpendicular shaft in the kingdom, being 815 yards from the surface; but before long it will be exceeded by two now in course of sinking in the same county. The sinking of the Ashton Moss Colliery, Audenshaw, near Manchester, was commenced rather more than five years ago, the coal having been proved by boring to be about 900 yards from surface. When one of the shafts was sunk to a depth of 600 yards the work was stopped for several weeks, when work was again resumed. One of the pits has already been sunk to a depth of about 750 yards, and the other about 500 yards. The work until recently was done by ordinary blasting, as it was considered that electric blasting would not be successful in sinking pits where the strata were inclined as much as one yard in two and a-half yards, or one yard in three yards. About three weeks ago, however, there was tested at one of the pits, and after one or two rounds of holes had been exploded it was found that the electric blasting worked as well in the strata which were much inclined as it did in the horizontal strata, the only difference being that three or four of the dip side holes required more dynamite. The pits are each 16 ft. in diameter when bricked, but they are sunk 18 ft. wide, so that blasting operations cannot be said to be difficult. The electric blasting was tested both in strong stone bind and also in rock, whilst 12 sump holes 6 ft. 6 in. deep were bored and exploded, and afterwards 11 side holes, and sometimes 12, were exploded. The holes broke the ground to a depth of about 7 ft., and on one occasion when 12 sump holes had been exploded a piece of ground was found to be reared up against the pit side containing about 63 cubic yards, and it took three smaller holes to break it up. But this could be easily avoided by putting some of the dynamite near the top of one of the middle holes. Tonite and powder mixed had been previously used, but it had been found that dynamite does not take up so much time in boring the holes.

In one of the middle holes 6 ft. deep 14 2-oz. cartridges of dynamite were inserted; then there were 2 ft. 6 in. of sand, upon which seven more cartridges were inserted; when upwards of 7 tons of strata, 9 ft. 6 in. in diameter, and 2 ft. 10 in. were lifted upwards. The electric blasting was conducted by Mr. C. Walker, a member of the Midland Institute of Mining Engineers, and who has had great experience in the sinking of mines by simultaneous blasting by electricity, and who has shown that dynamite is far more effectual at the bottom of a hole than powder, as it went down much further; nothing in fact appears to equal dynamite in wet working. The coal being sunk to is what is known as the Black Mine, and the colliery being opened out is little more than two miles from the well known Dukinfield Colliery, or what are more generally known as the Astley Deep Pits, which are about 686 yards deep. It is said that were a pit to be sunk to the dip of these pits the coal would not be found at a less depth than 1000 yards, but we may now expect to see before long shafts to a greater dip even than that. The sinking at Ashton Moss is in the hands of Mr. John Higson, the eminent mining engineer of Manchester, who has been connected with the sinking of some of the finest shafts in the kingdom.

NEW STEAM-ENGINE INDICATOR.—At the Northern Institute of Mining and Mechanical Engineers, Mr. D. P. Morison, of Newcastle-on-Tyne, exhibited a new form of steam-engine indicator, named the Kenyon's Pistonless, and explained its principle. The following is a brief account of it:—The desirability of a frictionless indicator has long been acknowledged; but although there have been several important improvements in details, the instruments in general use are still very defective, owing to the impossibility of making the piston-tight without incurring considerable friction, and necessarily making the diagrams unreliable. Every one conversant with the Indicator has experienced this, and must also have noticed that where the steam is "silty" the friction is so great as to cause the piston to bind so tightly as to become jerky, and even immovable. Further, with a high initial pressure in cylinder, and a sharp cut-off, the weight of the piston in the instrument (especially in its descent) considerably distorts the figure. The patent Pistonless Indicator has been invented after years of careful study, with the express object of removing the most objectionable feature of the ordinary indicator, the piston retaining at the same time its best features. The oval tube, commonly known as the Bourdon Tube, but with important improvements therein, is used instead of the piston. This tube has long been acknowledged the best pressure gauge, and few engineers will dispute its superiority over a piston for this purpose, hence the importance of its introduction in the indicator will be readily understood. Advantages of Kenyon's Pistonless Indicator—having no piston it cannot be fouled by grit or silty steam. The annoyance often experienced of having to take the instrument to pieces repeatedly to clean out the cylinder, &c., before obtaining anything like a satisfactory diagram is entirely avoided. There is no friction of the piston to overcome, hence the instrument is more sensitive, and more reliable figures are obtained. There being no escape of steam from cylinders, the diagram papers cannot get soiled thereby. There is greater facility for interchanging the tubes than springs of ordinary indicators. The instrument responds more freely than any other, and is thoroughly reliable. It can be tested at any time on an ordinary pressure gauge test pump.

NEW ZEALAND—HONOUR TO A MINER.—The New Zealand Official Gazette of May 29 contains the gratifying announcement that his Excellency Sir Hercules Robinson, G.C.M.G., has been pleased to place Mr. JAMES THOMAS, of Coromandel, the general manager of the Kapanga Gold Mining Company, on the Commission of the Peace for the Colony of New Zealand. Mr. Thomas, who has been in the colony for about ten years, is the son of the late Capt. Chas. Thomas, of the Denenolomane Barytes and other mines, County Cork, and nephew of Capt. William Thomas, of Coosheen Mines, Schull, whose interesting communications with regard to the progress and prospects

of Irish mining have been for many years familiar to the readers of the *Mining Journal*.

#### THE GOLD RICHES OF VENEZUELA.—No. II.

It has already been mentioned that of the two roads diverging from Guacipati, the western one leads to the new mining district of Pastora and Cicapras, distant about seven leagues; the road passes across an open savannah or prairie, and is in good condition. Pastora is an old Spanish settlement, but now is a mere small village only of consequence from giving its name to the district; it may, however, be made of more importance in time as a food-producing centre, as the spot where it is situated is very fertile, and capable of growing large quantities of both animal and vegetable food. It is also quite possible, and indeed probable, that gold will be found in its immediate vicinity.

The distance between Pastora and Cicapras is about 1½ league; between them the powerful River Yuruari is crossed, and the country traversed is still much of the same character—viz., open savannah. Reaching Cicapras we drop at once upon a mining camp of the most primitive character, but prettily situated on the banks of the river of the same name. Two years ago there was not a house on the spot, or a sign of any industrial activity; now all is changed. Ranchos have sprung up as if by magic, some used as stores, but the greatest number as dwellings by the miners. In the stores provisions, certainly of a coarse character, but in sufficient quantity, can be obtained, whilst of course they also afford the usual supply of bad rum, &c. Further the store-keepers purchase the gold from the miners, out of which they naturally derive a large profit. A rancho is constructed simply enough; as many poles as are required for its intended size are stuck into the ground at regular intervals of three feet or so, next small branches are intertwined with them, and the whole finished with a plentiful coating of mud inside and out. The roof is formed of slight rafters covered with palm leaves, and is open at both ends for the sake of ventilation. This will serve to give an idea of one of the better class, but in many the mud coating is dispensed with.

When our informant visited the locality last January there was a total population of about 1000 gathered together on this spot, but now, from information since received, it seems that that amount has been nearly doubled; and all this has arisen in that short space of time, and in that far off spot, from the discovery of a few specks of gold in the River Cicapras. The news of this discovery, small as it at first was, soon spread, numbers of people were drawn to the place, and the search for the precious metal commenced. Ground near the river banks was turned up, and very soon gold was found in specks and nuggets more or less large, at a slight depth below the surface of the ground. These discoveries attracted a further number of diggers, and it very soon became evident that a stratum of gold-bearing clay existed over an area the extent of which is even yet unknown. A sub-prefect's office was established by the State Government for the purpose more particularly of regulating matters relating to the diggings; every man's claim was marked out, and all new claims had to be obtained by requisition from the authorities in proper and due form before the working of them was allowed. Miners then flocked to Cicapras in increasing numbers every week, store-keepers followed, a regularly formed town was laid out, and the notorious prosperity of the locality commenced. Gold was in many instances picked up in the streets of this township, and many plots of land that had been taken up for building purposes were diverted from their original purpose and dug up, quantities of gold being extracted from the underlying clay. Such was the commencement of the gold mining industry in Cicapras. Month by month from that time till this the quantity of gold obtained has augmented, and the growth and prosperity of the town has gone on increasing.

A claim for alluvial washing here consists of 100 square metres. The depth at which the gold is found varies with the slope of the ground. Near the river it is come upon at from 8 to 10 ft. below the surface, but as the ground rises gradually from the river bank the depth decreases to no more than 2 ft. or 3 ft. The clay is full of pebbles of rolled quartz (sub-angular) and other rocks, and contains much gold. The bed of the river itself is also washed, and gives grains, and even small pepitas of gold, but the diggings on land are much more productive, and afford considerably larger nuggets. The largest yet discovered weighed 150 ozs. troy, but very many of 8 ozs., 10 ozs., and up to 20 ozs. are found not uncommonly. The gold is of good quality, apparently containing about 8 per cent. of silver. About the end of last year investigations were commenced amongst the hilly ground to the south-west of the town with excellent results, more gold and larger nuggets being found. The clay from these localities has to be brought down to the River Cicapras for washing. Donkeys are used to carry it, and are loaded with 100 lbs. or 120 lbs for each journey. All the washing is done in the river itself, or in the water-holes close by it, by means of bateas. The batea is a wooden vessel, in shape similar to a very flat hollow cone. They vary from 20 in. to 24 in. in diameter, and from 2½ in. to 4 in. in depth in the centre. In washing a peculiar rotary motion is given to it by means of which the clay is washed away and the particles of gold sink into the lowest point of the vessel. The stones are picked out by hand as the operation goes on.

There are no data from which any accurate estimates can be formed of the weekly or monthly produce of these alluvial washings, but the fact stands for itself that a town of some 2000 inhabitants has sprung up there during the last two years, that the inhabitants are all supported, directly or indirectly by the riches of the clay beds, and that these riches give no sign of diminution, but on the contrary the yield is constantly on the increase. Some diggers have made their fortunes and gone away. It was reported last March at Ciudad Bolivar that one of them had realised \$80,000. This may be and probably is true, though we give it simply as a report, and do not vouch for its exactness.

Before leaving Cicapras it must be added that quartz veins have been found there, and explorations have been commenced upon them with most promising results. The quartz is of a brittle description, not difficult to crush, and containing besides the gold only oxide of iron and sulphides of iron and copper; specimens from the surface containing visible gold have given as much as 40 and 50 ozs. per ton. This mine, called the Concepcion Sifontes, has now been taken up by a strong company under the name of La Alianza de Cicapras, and work is being vigorously proceeded with. Many other quartz-vein mining concessions have been taken up near the town; on one of these, called La Esperanza, a trial shaft shows a strong lode, samples of which, not showing visible gold, have given an average of about 5 ozs. of gold per ton of quartz. This mine is favourably situated, having abundance of wood and water, and being upon a steepish hill-side can be worked to a large extent by means of levels without having to sink shafts.

Journeying through the Savannah, south-east from Cicapras, a gently undulating country is passed through for about four leagues, when the gold mining properties of El Arbolito and La Concepcion are reached. Upon the former vein mining is being commenced by a Venezuelan company, and we hear that lately important discoveries have been made. Last year a trial shaft was sunk, and quartz of an excellent quality, and showing visible gold, was obtained. This year another exploratory shaft has revealed a similar quartz, but of a still richer quality.

The Concepcion property, which covers 378 acres, is bounded on the north by the Arbolito, and the quartz veins of the latter run into it and dip under it. In one of the trial shafts sunk upon it a very promising quartz lode was found, which is doubtless a continuation of the lode of the Arbolito, it being quite similar both in description of country rock and quality of quartz. As this lode shows rich in the one property there is every probability of its proving equally rich in the other. An examination of the Concepcion has, however, revealed the fact that a large proportion of its surface is covered with gold-bearing alluvial clay similar to that of Cicapras, and immediately underlying the vegetable soil. A sample of 20 lbs. of this clay, taken from a shaft about 8 ft. deep, gave 24.81 grs. of pure gold, equalling more than 5½ oz. per ton. This, we need scarcely point out is a very high yield, and one which promises splendid results to the owners of the property, which is to be worked on an extensive scale by an English company now in course of formation.



This mine possesses also excellent facilities for working in the shape of timber and water.

One word about the climate of these portions of Venezuela. In Nueva Providencia certainly fever and ague (calentura) is common, but though unpleasant and depressing it does not seem to be very dangerous; but the district of Pastora, Cicapras, and La Concepcion seems to be a good deal healthier, and illness is very rare. This may probably be accounted for by its greater height above the sea, and by its being surrounded by a great extent of open savannah, permitting a free circulation of the air, and preventing the formation of miasmatic vapours. The ground is also much drier, which no doubt further contributes to its healthiness.

In concluding this sketch of the gold mining districts of Venezuelan Guayana, we may express our wishes for their thorough exploration, believing that with careful but vigorous and systematic working one result only can ensue—that of a complete and most profitable success.

NOTE.—In 1878 a new code of mining laws was adopted; previously the area of a mine on quartz lodes was 100 varas square, and on alluvial diggings 10 varas square; but in the code of 1878 vara (33 in. English) has been altered to metre (39½ in. English), thus giving an advantage to the concessionaire of about 18 per cent. in the area of his property. Nearly all the Nueva Providencia mines were taken up under the old law, but the Cicapras diggings under the new.

THE NATIONAL ASSOCIATION OF MINERS.

A local representative deputation from this Association waited on the Home Secretary at Whitehall on Friday, to bring under his notice various questions affecting the interests of miners. The deputation was introduced by Mr. Macdonald, M.P., included Mr. T. Burt, M.P., and about 25 delegates from Durham, Lancashire, and other mining districts. Mr. Macdonald, in introducing the deputation, said that its object was to lay before the Government the views which had been brought forward at the Miners' National Conference held at Manchester in December. He hoped that the commission which had been appointed on the subject of mining would be able to issue its report before the meeting of the next Parliament, and that the Home Secretary would then be able to introduce a measure dealing with the safety of miners. They did not claim special legislation, but adequate protection from the dangers to which they were exposed. Mr. Benjamin Pickard (West Yorkshire) said it was important that the workmen should not be allowed to enter a mine to which the Mines Act applied until it had been examined and reported free from gases. Mr. W. Pickard (Wigan) called attention to the effects of the use of explosives in mines. They should be entirely prohibited where gas was given off or any accumulation of explosive gases was known to exist. Sir W. Harcourt: This matter is under the careful consideration of a scientific commission. It will be one of my first duties to examine their report when presented. The subjects next brought forward were the responsibility of chief managers, the precautions to be observed in the opening of new mines, and the granting to firemen of certificates of competency. Mr. Joseph Toynne (Cleveland) urged the desirability of appointing a Minister of Mines to attend to mining matters exclusively. Mr. N. Wilkinson (Durham) hoped that steps would be taken to insure that miners should have full liberty to employ any person they pleased as check-weigher, and to insure that he should not be removed by any action of the employer. Sir W. Harcourt, in reply, said the deputation must be aware that his personal knowledge of the matters brought before him was somewhat limited. All he could say was that he always would endeavour to make himself acquainted with those matters which concerned the interests of the miners. Mining was one of the great trades upon which the prosperity of the country depended, and while they should do nothing to cripple it, yet all necessary security should be taken with regard to the lives of the miners. Their object would be to give the greatest possible security. Legislation of this kind must necessarily be of a tentative character. The late Government had very properly appointed a scientific commission to examine into one particular question which had been alluded to—the blasting of mines. He awaited their report with considerable anxiety. The question of inflammable mines would undoubtedly have to be dealt with in the future. They would not expect him to commit himself that day to any definite statement. It would be his duty during the recess to consult with the Inspectors as to the various points which had been raised. The deputation might rest assured that he would consider in every way in what points the existing legislation had been defective and in what manner that legislation could be improved. Mr. Macdonald thanked the right hon. gentleman, and the deputation withdrew.

INDIAN GOLD MINING—MYSORE.

The existence of rich gold-bearing veins in the Colar District of Mysore, Southern India, has long been known, and for many generations the natives have obtained large quantities of gold from surface excavations, but not having suitable appliances for deep mining, have never been able to carry their workings to a depth of more than about 70 ft. It is now, however, intended to carry on systematic mining, and an influential company—the Colar Gold Mining Company—is now in course of formation, with a capital of 150,000l., in shares of 1l. each, for the purpose of acquiring some extensive rights whereon to commence operations. The prospectus, which will be found in another column, states that the property is situated on the Mysore Plateau, at an elevation of about 3000 ft., and about 40 miles east of the large military station of Bangalore, celebrated for its healthy character, and as a resort for Europeans.

The Madras and Bangalore Railway runs near the property, and a station is within four miles; the distance from Madras is 170 miles, and a line to the fields is being arranged for, or a tramway could be laid to the reefs at a cost of much under 50l. per mile. Machinery shipped in this country can, within six weeks, be landed, put on railway wagons at Madras, and within 12 hours delivered at Colar. Abundant wood for fuel can be purchased in the neighbourhood at a moderate cost, and reports from the district show that an adequate supply of water can be obtained for milling purposes. Labour is abundant, the wages of women and men being from 3d. to 6d. per day, the supply increasing with the demand.

The mining rights to be acquired by the company are about half a square mile in extent, forming the northern portion of the Madamangle block, and on land on the Ooregum block, mining on an extensive scale was recently commenced, and large quantities of gold-bearing quartz have been raised. The company will hold the portion mentioned of the exclusive right of mining granted by the Government of Mysore on the Madamangle and Ooregum blocks, subject to the payment of the land tax, or annual assessment to the land revenue, and other payments which, as respects the portion to be purchased by the company will, it is believed, be under 10l. per annum, and also to a royalty of 5 per cent. on the net sale proceeds of all gold, metallic ores, coal, and other substances of a saleable or merchantable nature which shall be obtained by the lessee, but subject to a stipulation that if the Government of India shall at any time after the date of the grant fix for British India a royalty of the description before mentioned, less in amount than 5 per cent., then the royalty reserved by the grant shall be reduced to a similar amount, subject, however, to a royalty of 10 per cent. upon the saleable value of all precious stones, should any be found on the land. The Government of British India, being desirous of encouraging the working of gold mines in the Madras Presidency, has intimated its intention to waive for a time all royalties on gold.

The prospectus is particularly explicit and straightforward; it states that in pursuance of arrangements begun some months since with Mr. T. D. Sargent and others, a sale of the said mining rights was arranged for to them for 25,000l., and they subsequently proposed a transfer to a company of 50,000l., but, after various negotiations, and in order to secure the co-operation of some of the concessionaires, that amount was reduced to 40,000l., a sum, it is believed, not at all too large, considering the further information to hand as to the mining prospects. One of the concessionaires, Mr. Anderson, now takes the place of the original purchasers, and so the block is secured to the company at 40,000l., and the transfer is direct to the

company, with Mr. Sargent as trustee. It is proposed in the first instance to issue two-thirds only of the nominal capital, and one-third of this issue (33,000l.) will be taken by the vendors in fully-paid shares. The concessionaires get 25,000l. of those shares, and Mr. Anderson—as the arrangements, which have occupied several months, were made by him, and as he has already incurred various expenses, and is to defray all the preliminary expenses of the company (including the expenses of the concessionaires), and as he runs all the risks in the formation of the company—will receive, in addition to his share as a concessionaire, the difference of 15,000l.—7000l. in cash, and 8000l. (part of the above 33,000l.) in fully paid shares. The prospectus also contains the unusual, but gratifying, announcement that the directors are personally acquainted with the district, and can, from personal observation, testify that the reefs in the district are auriferous, and that gold has been obtained from them. They believe that the mineral value of the land is very great, and the latest workings and reports are in every way confirmatory.

The professional evidence of the value of the property is of a peculiarly impartial character, being no less than the incidental reference in the report upon some adjoining land. Reporting for Messrs. Arbuthnot and Co., of Madras, and another company on land immediately to the south of that of the Colar Company, Mr. John Harris states that the number of quartz reefs that have heavy outcrops showing up, and that may also be traced by extensive surface workings, is six; they can be traced down from the Ooregum Mine on the north end of the field right through to the south end of the Madamangle block—that is, right through the Colar Company's land. The ground between the reefs is filled in with a laminated trap-rock, which forms the head and footwalls of the respective reefs. And equally satisfactory evidence is given by the engineer of the Mysore Gold Mining Company, whose southern boundary is the Colar Company's northern boundary. The Colar Company has secured from the concessionaires the right of purchase of a block of land between their land and that of the Madras Gold Mining Company—one half-mile (which would then make their holding one square mile)—such right to extend over a period of six months from the 1st inst. at a fixed price of 50,000l., one-half in shares, the other moiety in cash; and in the event only of that purchase being concluded would the balance of the capital be called up. Holders of the first issue to have the option of subscribing for the new shares *pro rata*. Of the sum of 50,000l. Mr. Anderson will receive 5000l. in fully paid-up shares for his services in getting up the company, in addition to his share as a concessionaire.

With regard to the probable profits it is estimated that working 90 tons per day for 300 days a year, and obtaining a yield of only ½ oz. of gold to the ton, the gold at 36 rupees per ounce would be worth 486,000 rupees, whilst the cost of raising and crushing at 8 rupees per ton would be but 216,000 rupees, leaving a profit of 270,000 rupees, or 25,000l.; were the yield 1 oz. per ton, the profit would be over 70,000l. The directors consider that the probability is that the land will before long command a large value per 15 or 20 acre block—in itself a large claim—and that land will be sublet by the company, each 15 acre block bringing a value equal to 25 to 50 per cent. on the capital. Similar reefs in Australia and California are now being worked to a depth of 1000 to 1500 feet.

WEST LISBURN MINES.—We omitted at the time to notice the West Lisburne Mines (Limited), the prospectus of which appeared in last week's Journal. The company is formed with a capital of 20,000l., in 1l. shares, to work a very valuable silver-lead set, in the celebrated Lisburne district, in Cardiganshire. As the mines were left productive when the former working was abruptly terminated by the death of the owner, and have since remained idle owing to legal difficulties, which have only lately been surmounted, it is confidently expected to place the enterprise on the Dividend List in a comparatively short period after commencing operations, which will not be delayed, a large portion of the capital having already been applied for by the directors and other friends. We are pleased to notice the name of Capt. N. Bray on the directorate.

SAN PEDRO AND CANON DEL AGUA MINING COMPANY.—At the meeting of the directors held in New York on July 24, Gen. U. S. Grant was unanimously elected president in the place of Mr. George W. Ballou, resigned. The property, which comprises 40,000 acres of land, including valuable gold and copper mines, is situated in New Mexico, about 36 miles south of Santa Fe, and was purchased last November by Mr. Ballou, in conjunction with a number of Boston gentlemen, at a cost of \$500,000. A company, having Mr. Ballou as president, was organised in January with a nominal capital of \$10,000,000, divided into \$25 shares, and the work of development was begun. The following is the list of officers of the company as at present organised:—President, U. S. Grant; vice-presidents, Geo. William Ballou, R. M. Pulsifer; secretary and treasurer, D. H. Darling; superintendent, M. G. Gillette; directors, U. S. Grant, R. M. Pulsifer, Thomas Dana, F. M. Holmes, E. L. Motte, M. Farnum, A. Merriam, B. F. Grafton, George William Ballou.

BETTWS-Y-COED LEAD MINING ASSOCIATION.—At an extraordinary general meeting of shareholders, held at the George and Railway Hotel, Bristol, on Aug. 2, the following resolutions were unanimously passed:—That this company be wound up voluntarily; and that Mr. Edwin Wotton, of Taunton, be appointed sole liquidator, and that his remuneration be fixed hereafter.

BELL VEAN (Gwynedd).—A cross-cut is now being driven to intersect the Gobbin's tin lode, the forehead of which is now close up to the lode. As will be seen from Captain James Bray's report in another column very assuring indications are being met with. This cross-cut is driven at the level of the low adit, which unwaters without pumping this part of the mine to a depth of nearly 50 fms., and should a good lode be met with it must in such a position prove singularly profitable.

THE BRITISH WAGON COMPANY (Limited).—The twenty-third half-yearly report of this company shows an improvement on the previous half-year. The directors have been able during the half-year to add to the wagon stock 723 wagons, to acquire which an investment of capital has been made to the extent of 30,403l. 12s. The stock of wagons now stands at 7239. The wagons in the company's hands have been kept in a good state of repair. The profits for the half-year amount to 2316l. 10s. 9d. This, with 261l. 17s. 5d. brought forward from last half-year, places the sum of 2578l. 8s. 2d. at the disposal of the directors, and they recommend the payment of a dividend of 7l. per cent. per annum, free of income tax, and that the balance of 503l. be carried to next account. The directors much regret the resignation of Mr. Geo. Brown, who had been a director of the company since its formation. Mr. Ferdinand Wheatley, of Kimberworth Park, has been appointed to the vacant seat for the remainder of Mr. Brown's term of office.

LEAD ORES.					
Date.	Mines.	Tons.	Price per ton.	Purchasers.	
July 31—	Court Grange	30	£14 1 6	E. C. Goodhart and Co.	
Aug. 10—	Isle of Man	100	12 12 0	Par Smelting Works.	
—	Central Foxdale	80	14 7 0	ditto	
12—	Talargoch:				
—	Maes-y-wydd	55	10 16 6	Walker, Parker, and Co.	
—	Coetia Llys	20	13 17 6	ditto	
—	North Hendre	50	10 5 0	ditto	
—	ditto	50	10 8 6	Adam Eytton.	
—	Rhosemor	30	10 10 6	Quirk, Barton, and Co.	
—	Rhydalun	20	10 13 6	Adam Eytton.	
—	Gwyn-y-mynydd &				
—	Fownog	17	10 15 0	Quirk, Barton, and Co.	
—	Prince Patrick	30	10 18 0	Walker, Parker, and Co.	
—	Sir Edward	6	10 8 6	Adam Eytton.	
—	Coetia Mawr	6	10 5 6	Walker, Parker, and Co.	
—	Tankerville	35	10 3 0	Nevill, Druce, and Co.	
—	ditto	35	10 2 0	ditto	
—	ditto	10	9 9 0	ditto	
13—	South Darren	40	15 1 6	Goodhart and Co.	

BERLANGA.—This company have sold to Messrs. Price and Co. 260 tons—80 per cent. lead, 8 ozs. silver—at 12l. 2s. 6d. per ton.

BLENDE.					
Date.	Mines.	Tons.	Price per ton.	Purchasers.	
Aug. 11—	Talargoch	140	£4 1 6	Swansea Vale Co.	
—	ditto	93	4 1 0	Crown Zinc Company.	
—	ditto	47	4 1 0	Vivian and Sons.	

COLAR CONCESSION, MYSORE.

THE COLAR GOLD MINING COMPANY (LIMITED).

Incorporated under the Companies Acts, 1862 to 1880. Capital £150,000, in Shares of £1 each.

Present issue £100,000 only, of which one-third is taken by the vendors.

Deposit on application, 5s. per share; on allotment, 5s. per share; balance, 10s., on 18th October. The deposit will be returned in full if no allotment is made.

DIRECTORS.

Colonel ALEX. W. C. LINDSAY, East India United Service Club, St. James's-square, late Deputy Commissioner in the Mysore Province.

Major-General JAMES H. PEARSE, East India United Service Club, and of Onslow Gardens, late Commissioner of the Bangalore Division, Mysore.

A. HAY ANDERSON, of Glenlee and Arrapetta, The Wynyard, 14, Hillsborough-square, Glasgow; and Canning Villa, Upper Norwood, Surrey.

\*W. D. RYRIE, Esq., Oriental Club, Hanover-square.

\*R. A. WILLIS, Esq., of Messrs. R. A. Willis and Co., 5, East India avenue, E.C.

\*Will join the Board as soon as the company commences operations.

BANKERS—The LONDON JOINT-STOCK BANK.

SOLICITORS.

Messrs. SIMPSON & CULLINGFORD, 85, Gracechurch-street, E.C.

AGENTS.

IN LONDON—Messrs. WILLIS & CO., 15, Cockspur-street, Pall Mall.

IN INDIA—Messrs. C. H. B. FORBES and CO., Bombay.

AUDITORS.

Messrs. JAMES and EDWARDS, Chartered Accountants, 110, Cannon-street, E.C.

CONSULTING ENGINEER.

THOS. J. BEWICK, Esq., M.E., M.Inst.C.E., Director of Associated Mine Owners (Limited).

BROKERS—To be afterwards nominated by the Directors.

REGISTERED OFFICES—5, EAST INDIA AVENUE, E.C.

SECRETARY (PRO TEM.)—S. VESEY TIDY, A.C.A.

ABRIDGED PROSPECTUS.

The Colar Gold Mining Company is formed for the purpose of acquiring extensive mining rights and working for gold and other minerals in the Colar District of Mysore, in Southern India.

The existence of rich gold-bearing veins in this district has long been known, and for many generations the natives have obtained large quantities of gold from surface excavations; but, not having suitable appliances for deep mining, have never been able to carry their workings to a depth of more than about 70 ft.

The property is situated on the Mysore Plateau, at an elevation of about 3000 ft., and about 40 miles east of the large military station of Bangalore, celebrated for its healthy character, and as a resort for Europeans. The Madras and Bangalore Railway runs near the property, and a station is within four miles; the distance from Madras is 170 miles, and a line to the fields is being arranged for, or a tramway could be laid to the reefs at a cost of much under £50 per mile. Machinery shipped in this country can, within six weeks, be landed—put on railway wagons at Madras—and, within 12 hours, delivered at Colar.

The mining rights to be acquired by the company extend over a block of about half a square mile. Mining on an extensive scale was recently commenced on land on the Ooregum block, and large quantities of gold-bearing quartz have been raised.

The exclusive right of mining in the district was granted by the Government of Mysore to Lieut.-Colonel de la Poer Beresford, and now, after a prolonged and careful survey, he has acquired the rights over the special blocks of land called "Ooregum" and "Madamangle," each of two square miles, and lying contiguous.

The two blocks named have been subdivided into smaller blocks or sections. The mining rights over some sections of the Ooregum block were sold by the concessionaires—part by direct, part by indirect, sale—to the Mysore Gold Mining Company; those over part of the other block to the Madras Gold Mining Company; the 320-acre section, half a square mile, the rights in which are now to be acquired by the Colar Company, is the northern portion of the Madamangle block, and is secured to the company for £40,000.

The vendors defray all the preliminary expenses of the company.

The directors are personally acquainted with the district, and can from personal observation testify that the reefs in the district are auriferous, and that gold has been obtained from them. They believe that the mineral value of the land is very great, and the latest workings and reports are in every way confirmatory.

To put the matter as far as possible beyond doubt, and take it out of the phase simply of reports on samples of stone, or small—and as a rule unreliable—laboratory tests or experiments, it would appear, from accounts and reports submitted to the concessionaires, that 17 tons of stone raised on the Ooregum block, from a depth of about 80 ft., and treated with machinery not of the best, yielded 4½ ozs. of gold; and, again, from a different, though adjacent, lead 9 tons gave 2½ ozs.

The directors consider that extracts and references to reports from entirely independent sources, by mining engineers of experience, who, though not reporting on this company's land, fortunately referred in their reports to reefs which run through it—north and south—will tell with even greater force than had a report been written or obtained expressly for this company. For instance—

Mr. John Harris, for Messrs. Arbuthnot and Co., of Madras, and the Madras Gold Mining Company, reports on the land to the south of the Colar Company's, and in the same block, under date Bombay, May 10—

"The number of quartz reefs that have heavy outcrops showing up, and that may also be traced by extensive surface workings, is six; they can be traced down from the Ooregum Mine on the north end of the field right through to the south end of the Madamangle block."

that is, right through the Colar Company's land.

"The ground between the reefs is filled in with a laminated trap-rock, which forms the head and footwalls of the respective reefs."

And, referring to the report recently made for the Mysore Gold Mining Company—on their own land—it may be observed that their engineer stated that the auriferous lodes were true fissure veins, and that in a section across the southern boundary (of their own land) he had found five well-defined lodes. The report further stated that the most important lode had been traced north through the Ooregum Company's property and southward for four miles. The directors refer to this, as the southern boundary of the Mysore Company's land is the northern boundary of the Colar Company's, and the four miles embrace all the Madamangle block, as see small copy plan of the land which accompanies the prospectus.

The company has secured from the concessionaires the right of purchase of the block of land between their land and that of the Madras Gold Mining Company—one half-mile (which would then make their holding one square mile)—such right to extend over a period of six months from the 1st inst., at a fixed price of £50,000, one half in shares, the other moiety in cash; and in the event only of that purchase being concluded would the balance of the capital be called up. Holders of the first issue to have the option of subscribing for the new shares *pro rata*.

Applications for shares should be addressed to the directors of the Colar Gold Mining Company, Limited, 5, East India-avenue, E.C., where full prospectuses, with forms of application and maps, can be had, and where copies of agreement with the Mysore Government, &c., can be seen, as well as at the offices of the company's solicitors, Mr. John E. Watson, C.A., 149, Hope-street, Glasgow; Mr. J. A. Robertson, C.A., 1, North St. David-street, Edinburgh; and the copies of agreement can also be seen at the offices of Messrs. Francis and Johnson, 22, Austin Friars, E.C., solicitors to the concessionaires. London, Aug. 12, 1880.



**ENGINES, BOILERS, &c., FOR SALE.**—  
FIRST-CLASS 50-inch cylinder PUMPING ENGINE.  
ditto 24-inch ROTARY ENGINE  
48-Head STAMPS, CALCINER, &c.  
Apply to Capt. NICHOLLS, Camborne.

**AIR-COMPRESSOR FOR SALE.**—  
Vertical Direct-Acting, combined with Steam Engine. Jack-  
etted Air Cylinder, 10½ in. diameter: steam cylinder, 11 in. diameter,  
18 in. stroke. Other sizes in progress.  
**ALEX. WILSON AND CO.,**  
ENGINEERS,  
VAUXHALL IRONWORKS, WANDSWORTH ROAD.

**BURLEIGH ROCK-DRILLING MACHINERY**  
FOR SALE.  
THREE A size ROCK-DRILLING MACHINES. Will drill in  
hard rock up to 1½ in. diameter.  
ONE B size. Will drill up to 2 in. diameter in hard rock.  
TWO C size. Will drill up to 3 in. diameter in hard rock.  
ONE D size. Will drill up to 4 in. diameter in hard rock  
ONE A size PORTABLE AIR COMPRESSOR. Will drive two  
B size ROCK DRILLING MACHINES,—driven by a pulley or gearing.  
The above are all new and offered at maker's prices.  
Apply to—  
**CRAVEN BROTHERS,**  
OSBORNE STREET, MANCHESTER.

**LOCOMOTIVE TANK ENGINES**  
FOR MAIN LINE TRAFFIC, SHORT LINES, COLLIERIES,  
CONTRACTORS, IRONWORKS, MANUFACTORIES, &c., from a superior  
specification, equal to their first-class Railway Engines, and specially adapted to  
harp curves and heavy gradients, may always be had at a short notice from—  
**MESSRS. BLACK, HAWTHORN, AND CO.,**  
LOCOMOTIVE, MARINE, AND STATIONARY ENGINE WORKS,  
GATESHEAD-ON-TYNE.

**THE "JAMIN" PATENT ELECTRIC LIGHT.**  
COMPAGNIE GENERALE D'ÉCLAIRAGE ÉLECTRIQUE.  
Capital, 8,000,000 Francs.  
Proprietors of the Gramme Patent Machine for Alternate Currents.  
**J. A. BERLY, C.E., A.S.T.E., &c.,**  
Engineer, and Sole Agent for Great Britain and the Colonies,  
16, NEW BRIDGE STREET, LONDON.

**IMPROVED ECONOMIC ORE-DRESSING**  
**MACHINERY.**  
**MESSRS. W. NANCE AND CO.** beg to call attention to their  
IMPROVED ORE DRESSING MACHINERY.  
IMPROVED CRUSHING MILL, combining the "Marsden Patent Stone  
Breaker" with the "Improved Cornish Crusher," reducing the hardest rock to  
sand in one operation, and delivering the same in a classified state to their im-  
proved air cushioned jiggers automatically, and also delivering the slimes auto-  
matically to the slime dressers, effecting an economy of 90 per cent. of labour  
and 90 per cent. of the ore wasted under the old system, and is at the same time  
applicable to all kinds of ore, including gold washing, refining, &c.  
Improved Air-Cushioned Piston Jiggers and Vanning and Percussion Slime  
Dressers, with all kinds of machinery, &c.; Classifiers and Slime Dressers.  
Inspection of Mines at home and abroad. French and German spoken.  
BUSINESS DONE IN ALL KINDS OF STOCKS AND SHARES, subject to the rules  
of the London Stock Exchange.

**NANCE AND CO.,**  
MINING ENGINEERS,  
STANLEY-STREET WEST, NORTH SHIELDS.

**CHINA-CLAY.**  
A TREATISE, TECHNICAL AND PRACTICAL, ON THE NATURE, PRO-  
DUCTION, AND USES OF CHINA-CLAY, WITH USEFUL TABLES,  
STATISTICS, AND OTHER INFORMATION BEARING ON THE  
SUBJECT. PRICE FIVE SHILLINGS.  
BY DAVID COCK,  
MINING ENGINEER, ST. AUSTELL.  
Wolverhampton: JOHN STEEN and Co., Queen-square, and St. John's  
street. London: SIMPKIN, MARSHALL, and Co.  
AND ALL BOOKSELLERS.

**EXTRACTS FROM THE PRESS.**  
"The first publication which has aspired to give anything like a comprehensive  
account of the subject, it deals adequately with the general circumstances of the  
industry. . . . The book has considerable interest.—*Western Morning News*,  
May 11, 1880.  
"An excellent chapter on geology, giving as complete an exposition of the  
science as could reasonably be expected. . . . The chapter on the Uses of  
China Clay in the Arts is a particularly interesting one. . . . The volume  
certainly well fulfils the author's intention—that of supplying a complete and  
reliable treatise on the subject—and will, without doubt, be extensively read and  
appreciated.—*Mining Journal*, May 15, 1880.  
"A trustworthy and somewhat exhaustive treatise. . . . A desideratum in  
general science and technology. . . . Indeed, the publication is complete. It  
is the first attempt that has ever been made to treat the subject thoroughly, and  
well deserves to be read by one and all.—*Western Daily Mercury*, May 19, 1880.  
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All this information is illustrated by useful drawings.—*West Briton*, June 3, 1880  
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valuable information.—*The Pottery Gazette*, June 1, 1880.  
"A trustworthy guide to the various branches of the subject treated upon,  
which comprise its geological and mineralogical aspects, its mode of working,  
and preparation for the market, and its mode of use in various industries of the  
country, more particularly in pottery and porcelain, sizing of cotton goods, and  
the manufacture of alum and its compounds, ultramarines, papier maché, and  
numerous other articles; and it is altogether a reliable and comprehensive col-  
lection of information.—*The Paper Makers' Circular*, June 15, 1880.  
"The book is well worth perusal, and ought to find numerous readers amongst  
the various classes of consumers of the article.—*The Textile Manufacturer*,  
June 15, 1880.

**CHINA CLAY.**  
A TREATISE,  
TECHNICAL AND PRACTICAL,  
ON THE NATURE, PRODUCTION, AND USES OF  
CHINA CLAY.  
BY DAVID COCK, of  
ST. AUSTELL.  
PRICE FIVE SHILLINGS.

**LOSS OF TIME IS LOSS OF MONEY!**  
**ACCIDENTS CAUSE LOSS OF TIME**  
And may be provided against by a Policy of the  
**RAILWAY PASSENGERS ASSURANCE COMPANY.**  
The oldest and Largest Accidental Assurance Company.  
The Right Hon. LORD KINNAIRD, Chairman.  
SUBSCRIBED CAPITAL . . . . .£1,000,000  
MODERATE PREMIUMS.  
BONUS ALLOWED TO INSURERS OF FIVE YEARS STANDING.  
A fixed sum in case of death by accident, and a weekly allowance in the event of  
injury.  
ONE MILLION AND A HALF  
HAS BEEN PAID AS COMPENSATION.  
Apply to the Clerks at the Railway Stations, the Local Agents, or  
64, CORNHILL, LONDON.  
**WILLIAM J. VIAN, Secretary**

**PERRAN FOUNDRY, CORNWALL.**  
**MESSRS. OLVER AND SONS** have been favoured with  
instructions TO SELL, BY PUBLIC AUCTION, on Thursday, the 19th  
day of August next, at Three o'clock in the afternoon, at the Red Lion Hotel, in  
the City of Truro, the old-established and well-arranged Premises known as  
**WILLIAMS'S PERRAN FOUNDRY,**  
At Perranarworthal, in the county of Cornwall.  
These works comprise a total area of 4 A. 2 R. 11 P., and consist of large  
PATTERN, SMITHS, ENGINEERS, and MOULDING SHOPS, BOILER YARD,  
HAMMER MILL, with suitable machinery (worked principally by water power)  
for the MANUFACTURE of CORNISH PUMPING, MARINE, and other  
ENGINES and BOILERS, and general foundry and engineering work. The  
premises include excellent engineers' drawing and other convenient offices.  
The buildings are constructed nearly all of stone, with slated or tiled roofs,  
are lofty, light, and spacious. The premises are situated within a mile of Perran-  
arworthal station, of the Cornwall Railway, and communicate with water with Falmouth  
harbour. A powerful crane, capable of lifting 25 tons, is erected on the shipping  
quay at Restronguet, to which vessels of 200 tons have access.  
The purchaser must take at valuation, to be made in the usual way, the  
machinery, plant, and tools, the whole of which are in complete working order,  
and can be put in motion at 12 hours' notice.  
The foundry premises, with water-course, are held on lease from Col. Tremayne  
for 99 years, commencing from Aug. 24, 1874, determinable on the deaths of three  
lives, now aged respectively about 19, 18, and 15 years, subject to the low con-  
ventional rent of 53*l.* 6*s.* 8*d.*, and heriot of 2*l.*  
The attention of the public is drawn to the fact that the buildings are of such  
construction as to be easily adapted to manufacturing purposes of almost any  
description.  
Further particulars may be had on application to the Auctioneers, Green Bank,  
Falmouth, and Clarence-street, Penzance; also of Messrs. COODE, SHILSON, and  
Co., Solicitors, St. Austell; and of Messrs. SMITH and PAUL, Solicitors, Truro.  
Dated July 28, 1880.

**MINE MACHINERY AND MATERIALS FOR SALE.**  
**CHRISTOW, DEVON.**

**MESSRS. WARD AND CHOWEN WILL SELL, BY PUBLIC**  
**AUCTION, on Thursday and Friday, the 26th and 27th days of August**  
**next, commencing each day at One o'clock P.M., at FRANK MILLS and WHEAL**  
**EXMOUTH MINES, in the parish of CHRISTOW, DEVON, the undermentioned**  
**VALUABLE AND EXTENSIVE MINING PLANT,**  
**MATERIALS, AND EFFECTS;**  
COMPRISING  
ONE PUMPING ENGINE, 60 in. cylinder, 10 ft. stroke, with TWO BOILERS  
(12 and 10 tons), balance bob, shears, two sheaves, shaft tackle with sheaves and  
landing brace.  
ONE STEAM CRUSHING ENGINE, 25 in. cylinder, 5 ft. stroke, with 10 ton  
BOILER, fly wheel, complete; CRUSHER, complete.  
ONE STEAM CRUSHING ENGINE, 22 in. cylinder, 3 ft. stroke, with BOILER  
and fly-wheel complete.  
Crusher, with iron shaft and driving wheels for working ditto; six double jig-  
ging machines, with shafting gear work and hatches; 18 ft. elevator, with gear  
work; 25 ft. WATER WHEEL, 2 ft. breast; eight-head stamps, with iron axle,  
heads, lifters, and frames, complete; Bartlett's pulveriser; 12 ft. water-wheels for  
driving boulders, with ironwork, 1½ in. rods, tooth wheels, with saddles and  
brasses; boulders, strips, flooring, &c.; large quantity of bridge and other rails;  
60 fms. of ½ in. chain, and sundry other chain; wood and iron tram wagons;  
crab winch; several fathoms of launders and stands; sheds of all sizes; coal  
weighing machine; beam, scales, and weights; copper and other sieves; the  
pitwork on the mine; and 50 fms. of 7 in. pipes; quantity of new round and flat  
iron; also wrought and cast scrap, screw plates and taps, screw stocks, smiths'  
tools, bellows, vice, &c.; single, double, and treble blocks and ropes; carpenters'  
benches; new and other timber; grinding stone; miners' and dressing tools;  
large boiler and timber wagons; cart; lifting jack; blasting powder; wheel and  
handbarrows; quantity of coal and iron ore on the Mine and at Newton; and a  
variety of other mining requisites.  
Also, the account-house furniture, dial, &c., bell and stand.  
THE MATERIALS AT WHEAL EXMOUTH comprise 18 ft. diameter IRON  
WATER-WHEEL, 18 in. breast, and crusher; jigging machines; about 8 tons of  
bridge rails, sleepers, useful timber, and various articles in store-room.  
Descriptive catalogues of the above, containing conditions of sale, may be had  
on application on and after the 6th of August next, of the proprietor, D. W.  
BAIN, Esq., Portreath, Redruth; the Auctioneers residing at Burnville, Bide-  
stowe, Devon; or of Capt. PROWSE at the mine, to whom parties are requested  
to apply for viewing the same, or for any further information.  
Refreshments at Frank Mills Mine on each day at Twelve o'clock precisely.

Wagonettes will run between Newton Abbot and the Mine on the days of sale,  
particulars of which may be known on application at Magor's Hotel.  
Dated Burnville, Bidestowe, 20th July, 1880.

**DENBIGHSHIRE.**  
**PARISH OF RUABON.**  
**MESSRS. CHURTON, ELPHICK, AND CO. WILL SELL,**  
**BY AUCTION, at the Queen's Hotel, Chester Railway Station, on Satur-**  
**day, the 28th of August, 1880, at Two for Three o'clock in the afternoon, in One**  
**or more Lots, as may be arranged, A VALUABLE FREEHOLD RESIDENTIAL**  
**ESTATE, known as**  
**"GARDEN,"**  
Situate near the town and within a mile of the first-class Great Western Railway  
Station of Ruabon, and within easy distance by rail or road of the towns of  
Wrexham and Llangollen.  
The Estate lies within a ring fence, and comprises the excellent gentlemanly  
residences of "GARDEN LODGE" and "PENYGARDDEN," with extensive  
buildings, gardens, pleasure grounds, water, and several COU-  
RTAGES and outbuildings, capable, and wood LANDS, and a VALUABLE  
QUARRY OF FREESTONE, and contains in the whole about 160 acres.  
At the same time, it is intended to OFFER FOR SALE the VALUABLE  
SEAMS AND VEINS OF COAL, IRONSTONE, and other MINERALS underlying  
the Estate, which are in lease to and actively worked by a company.  
Adjoining the Estate are the properties of Sir Watkin Williams Wynn, Bart.,  
William Cornwallis West, Esq., Henry Dennis, Esq., and others, and the turn-  
pike-road from Wrexham to Ruabon forms the north-eastern boundary.  
Plans and particulars are in course of preparation, and may shortly, with any  
other information, be obtained from the Auctioneers, Chester; or from Messrs.  
LONGUEVILLE, JONES, and WILLIAMS, Solicitors, Oswestry.

**STOBROSS DOCKS CONTRACT,**  
**GLASGOW.**

**MR. ARTHUR TREVOR CROW** (Contractors' Auctioneer) has  
been honoured with instructions from John Jackson, Esq., owing to the  
completion of the contract, TO SELL, BY AUCTION, at the Contractors' Yard,  
Stobross Dock, Glasgow, on Wednesday and Thursday, 29th and 30th September,  
1880, the WHOLE of the

**VALUABLE CONTRACTORS' PLANT,**  
Which was bought new for this contract, and a large portion of which has been  
in use for a few months only, consisting of  
TWO four-wheel coupled 10½ in. cylinder LOCOMOTIVE ENGINES;  
ONE HUNDRED four yard END AND SIDE TIP WAGONS;  
Bast trucks to permanent gauge; 24 powerful stone bogies; a quantity of  
4 lb. temporary steel rails; also 25 lb. iron rails; cylinder sinking machinery,  
with three 10 tons double cylinder steam winches and boiler; Lincoln-made  
portable engines, 6 and 8-horse power; about 900 tons cast-iron cylinder sinking  
weights; eleven 2 to 10 tons powerful steam derrick cranes, travelling on bogies,  
and with 60 ft. to 72 ft. jibs, by D. Cameron and Co., Glasgow; G. Russell and  
Co., Motherwell; and Morgan and Co., Kilwinning.  
Powerful overhead steam traveller; several powerful centrifugal and pulso-  
meter pumps; several thousand feet of red wood, white wood, and pitch pine  
timber, deals, and battens; steam pile driver; 200 tons scrap iron and metal;  
5000 sleepers; a number of masonry barrows; and a very large quantity of con-  
tractors' general plant and materials.  
Sale to commence each day at Ten for Eleven o'clock to a minute.  
Nearly the whole of the engines can be seen under steam on day of sale.  
Descriptive catalogues may be obtained at Mr. Jackson's offices, at Stobross  
Docks, Glasgow; and 4, Victoria-street, Westminster; and also from the Auc-  
tioneer's Office, Manor House, Sunderland.

**TO BE SOLD, pursuant to an Order of the High Court of**  
**Justice, Chancery Division, made in an action re Sir Frederick Martin**  
**Williams, deceased, Hussey v. Williams, 1879, W. No. 3, with the approbation of**  
**His Lordship the Master of the Rolls, the Judge to whose Court the said action**  
**is attached, in One Lot, BY MR. GEORGE FISHER, the person appointed by**  
**the said Judge, at the Auction Mart, Tokenhouse-yard, in the City of London, on**  
**Monday, the 30th day of August, 1880, at Two o'clock precisely, the LEASE of**  
**THE PRINCE OF WALES QUARRY,**  
Situate at Trewarner Down, in the Manor of Tintagel, in the county of Corn-  
wall. The purchaser is also to take at a valuation, as provided by the conditions  
of sale, the MACHINERY, PLANT, UTENSILS, STOCK-IN-TRADE, and  
EFFECTS in and upon the same.  
May be viewed by cards from the Auctioneers and Mr. THOMAS CHIRGWIN, 26,  
River-street, Truro; and particulars and conditions of sale may be obtained of  
Messrs. YOUNG, JONES, ROBERTS, and HALE, 2, St. Mildred's-court, Poultry,  
London, E.C.; of Messrs. GREGORY and Co., 1, Bedford-row, W.C.; of Messrs.  
SMITH and PAUL, Solicitors, Truro; and of Messrs. ROBINSON and FISHER, 21,  
Old Bond-street, W.  
YOUNG, JONES, ROBERTS, AND HALE,  
2, St. Mildred's-court, Poultry (Plaintiff's Solicitor).  
Dated this 31st day of July, 1880.

**THE WEST DOROTHEA SLATE COMPANY**  
(LIMITED). IN LIQUIDATION.  
**TO BE SOLD, the TYN-Y-WERGLLODD SLATE QUARRIES,**  
situate at Nantlle Vale, in the county of Carnarvon, together with the  
WORKING PLANT belonging thereto.  
For particulars, apply to W. W. TOMLINS, 4, St. Ann's-square, Manchester.

**FOR SALE, BY PRIVATE TREATY, an IRONWORKS,**  
capable of turning out 600 tons of finished iron a week, well  
adapted for conversion into steel; and TIN-PLATE WORKS, well  
situated for Railway, Canal, and Sea communication.  
Apply to Messrs. SHARPE, PARKER, PRITCHARD, and SHARPE,  
Solicitors, 41, Bedford-row, London.

## CWM PRYF MINES LEAD MINING COMPANY (LIMITED).

Incorporated under the Companies Acts of 1862, 1867, and 1877,  
by which the liability of shareholders is limited to  
the amount of their shares.

### DIRECTORS.

COLIN KENNEDY, Esq., Fort William, N.B.  
GRIFFITH HUMPHREY JONES, Esq., Merchant, Goginan,  
Aberystwith.  
Capt. A. FRANCIS, M.E., Goginan, Aberystwith.  
And after the issue of 2500 shares,  
Admiral THOMAS OGLE, Beaumaris, and another Gentleman  
will join the board.

CAPITAL £25,000, in 25,000 SHARES OF £1 EACH,

Of which 20,000 shares have been issued, and it is now determined  
to offer 2500 of the remaining 5000 shares at par, or £1 per share,  
payment in full on allotment, for the purpose of draining and open-  
ing the mine at the 20 and 30 fm. levels. To the latter depth the  
engine-shaft has been sunk.

The mine has already been brought into a profitable state from  
ore ground opened over the back of the deep adit, and from the  
refuse ore left at surface by the old workers; in fact, from samples  
taken of the ore heaps at surface and from the bulk so far as yet  
crushed it is ascertained, taking the value of the ore at £10 per ton,  
that there is £7000 worth of ore in it; and this can be sent to mar-  
ket at one-third of its value, and will, independent of any other  
source whatever, pay a high percentage in dividends on the whole  
capital during the proposed drainage of the mine, and opening out  
the ore ground referred to in the 20 and 30 fm. levels under adit.

The following are extracts of reports from the several mining  
authorities who have inspected the mine:—

On Nov. 20, 1879, Capt. A. Francis says—"When the mine has been  
brought into a thorough and efficient state of working over the deep  
adit, and regular returns and profits made, the drainage of this water  
will be attended to, and the 20 fm. level pressed eastward through  
ore ground developed and now developing in the deep adit level, and  
a section of from 2000 to 3000 fms. of rich ore ground be made  
speedily available, and also farther the 30 fm. level would follow in  
the same course when thought desirable." He also estimates "that  
when this work is accomplished a profit of £4000 per year can be  
made."

Feb. 23.—In his report he estimates "that when the 20 fm. level  
under the deep adit has been driven through the ore ground it will  
lay open £30,000 worth of ore, and that the 30 when pressed forward  
will yield additional ore ground to the extent of £20,000."

Mr. William Nance, of Cornwall, and now of North Shields, who  
has had an extensive experience in managing mines in most parts of  
Europe, reports—"Nov. 27, 1879: The water-wheel now in course of  
construction is of sufficient power to work all the machinery required  
for several years, and drain and sink the mine to a much greater  
depth; so that the only further outlay to drain the mine to the bot-  
tom will be a run of rods from the engine-shaft to the wheel, and  
30 fms. of pitwork, which will not cost more than £250, and consid-  
ering there is every probability of commencing to raise ore from  
this shaft as soon as it is drained, and that the levels can be im-  
mediately extended under the course of ore gone down in the bottom  
of the deep adit, I should recommend this to be done as soon as pos-  
sible, and a small air-compressor connected with the same wheel for  
driving a boring machine in the deep adit and 30 fm. levels, which,  
being driven by water-power, would enable you to drive the ground  
four times faster and 25 per cent. cheaper than by hand-labour; and  
I have no doubt if this is carried out the mine will soon be in a po-  
sition to make handsome profits, and the capital required for the  
whole plant will not exceed £2500."

Capt. A. Williams, March 17, 1880, reports—"The engine-shaft has  
been sunk 20 fathoms below deep adit level, and a cross-cut driven  
northwards into the lode, and a communication made from the 20  
up to the Baltic workings on the course of the lode though an excel-  
lent course of silver-lead ore. This level should be pressed on with  
all possible dispatch, as you have a run of ore ground ahead of it for  
about 120 fms. in length, and a back of 20 fms. to stop away up to  
the sole of the deep adit; but the engine-shaft has been continued  
to the 30 fm. level—thus giving 30 fms. back for 120 fms. long; and  
as I know by experience that the ore increases in depth I consider  
it quite safe to value it at 30 cwt. per fathom, and 120 fms. long by  
30 high gives 3600 fms. at 30 cwt. per fathom, equals 5400 tons—say  
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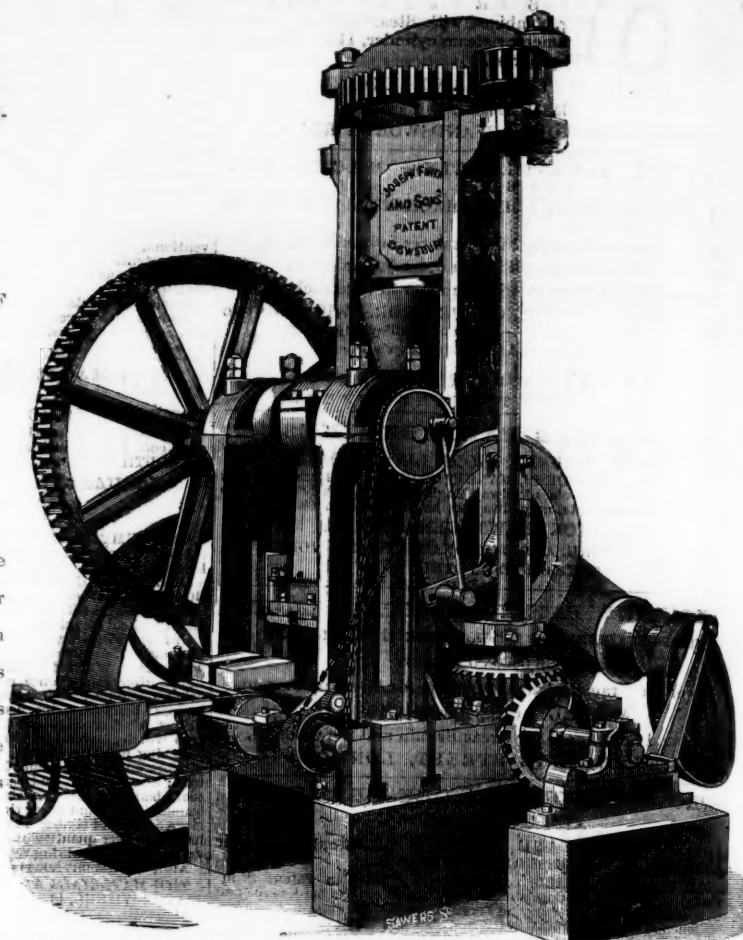
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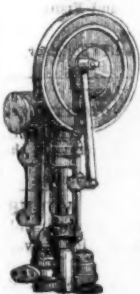
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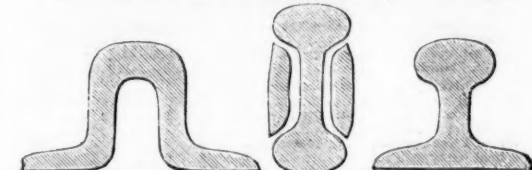
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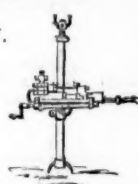
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5000	Treleigh Wood, <i>t</i> , Redruth	6	1 0
12000	Trévance Consols, <i>t</i> , <i>c</i> , Gwennap	0	5 0
6000	Truro, <i>c</i> , St. Martin	0	4 0
840	Truro, * <i>l</i> , & Nerguick, Flintshire	1	0 0
10000	Tyn-y-Fron, * <i>l</i> , Cardiganshire	1	0 0
11000	Un. Van & Glyn, * <i>l</i> , (& 41500 other sh.)	2	0 0
1000	Vaughan, * <i>l</i> , Cardiganshire	10	0 0
12000	West Assheton, <i>l</i> , Carnarvon	1	0 0
6000	West Basset, <i>c</i> , Illogan	0	4 17
6000	West Cardan, <i>s-l</i> , Clevedon	0	6 3
3000	W. Craven Moor, <i>l</i> , Pateley Bridge	10	0 0
10240	West Devon Consols, <i>c</i> , Calstock	1	0 0
12000	West Holway, * <i>l</i> , Flintshire	1	0 0
6000	West Kitty, <i>t</i> , St. Agnes	0	7 0
5000	West Mary Ann, * <i>l</i> , Menheniot	1	2 6
3000	Westminster United, Llanarmon	5	0 0
20000	West Pateley Bridge, * <i>l</i> , Yorkshire	1	0 0
12000	West Phoenix, <i>t</i> , <i>c</i> , Cardanon	0	6 8
5100	West Pollice, <i>c</i> , <i>l</i> , Devon	5	0 0
10000	West Vor, <i>t</i> , <i>ars-m</i> , <i>l</i> , Bideford	2	0 0
2048	West Wheel Frances, <i>t</i> , Illogan	29	6 15
3000	West Wheel Peavor, <i>t</i> , Redruth	1	12 6
1000	West Wheel Towan, * <i>l</i> , Cardanon	25	0 0
12000	West Wye Valley, * <i>l</i> , Montgomery	3	0 0
6000	Wheal Agar, <i>c</i> , Illogan	13	15 0
6144	Wheal Basset, <i>c</i> , Illogan	34	2 6
12000	Wheal Coates United, * <i>t</i> , St. Agnes	0	2 0
2580	Wheal Gwernol, <i>c</i> , & Treos, <i>c</i> , Gwennap	2	0 0
82000	Wheal Grenville, <i>c</i> , Camborne	5	0 0
12000	Wheal Jewel, <i>c</i> , St. Hilary	0	11 0
2048	Wheal Jane, <i>t</i> , Kea	6	13 10
6000	Wheal Owles, <i>t</i> , St. Just	7	3 0
2000	Wheal Prussia, <i>c</i> , Cardew	1	0 0
12000	Wheal Russell, <i>c</i> , Tavistock	2	1 6
6000	Wheal Sisters, <i>t</i> , Lelant	2	15 0
4096	Wheal Uny, <i>t</i> , <i>c</i> , Redruth	15	6 0
21000	Wstwith, * <i>l</i> , Cardigan	1	0 0

*bl*, blende; *c*, copper; *g*, gold; *l*, lead; *s*, silver; *sl*, slate;  
*s-l*, silver-lead; *t*, tin; *z*, zinc; *i*, iron; *a*, arsenic.  
 \* Limited Liability Companies; † quoted on the Stock Exchange;  
 ‡ have paid dividends.

§ Have made calls since last dividend was paid.

COMPANIES; GAS, IRON AND COAL, WAGON COMPANIES, &c.

TRAMWAYS.		
<i>Issue.</i>	<i>Shares.</i>	<i>Pl. Clas.</i>
40000...	5...Anglo-Argentine [L] .....	all 35 1/2
10000...	10...Barcelona [L] .....	all 103 1/2
7140...	10...Belfast Street Tramways .....	all 7 1/2
3050...	10...Birkenhead, Ordinary .....	all 65 1/2
8000...	10...Ditto, 6 per cent. Preference, all 104 1/2	
3200...	10...Bristol [L] .....	9, 113 1/2
25000...	10...Bordeaux Tram & Omni. [L] .....	all 107 1/2
3200...	10...Chester [L] .....	all 10 1/2
24000...	10...Dublin .....	all 155 1/2
14690...	10...Edinburgh Street Tramways .....	all 144 1/2
35000...	10...Glasgow Tramway & Omni. [L] .....	9, 125 1/2
10000...	10...Hughes Loco. and Tram. works, all 35 1/2	
7500...	10...Hull Street Tramways .....	all 9 1/2
7500...	10...Imperial [L] .....	all 5 1/2
34000...	10...Liverpool Unit. Tram & Om. [L] all 108 1/2	
25000...	10...London [L] .....	all 106 1/2
25000...	10...London Street Tramways .....	all 106 1/2
60000...	10...North Metropolitan .....	all 15 1/2
8000...	10...Nottingham and District [L] .....	all 84 1/2
15947...	10...Provincial [L] .....	all 113 1/2
6000...	10...Sheffield .....	all 7 1/2
5000...	10...Southampton .....	all 9 1/2
8000...	10...Sunderland [L] .....	all 6 1/2
10090...	10...Swansea [L] .....	all 9 1/2
12000...	10...Tramways of France [L] .....	all 84 1/2
16500...	10...Tramways of Germany [L] .....	all 84 1/2
40000...	5...Tramways and Gen. Works [L] .....	all 6 1/2
40000...	5...Traction Union [L] .....	all 6 1/2
25000...	10...Vale of Clyde .....	all 6 1/2
7200...	10...Wolverhampton [L] .....	all 9 1/2

## TELEGRAPH COMPANIES

TELEGRAPH COMPANIES			
Shares.		Pd.	Clos. pr.
Stk.	Anglo-American .....	100	0 64 1/4
10	Brazilian Submarine .....	10	0 9 9 1/4
20	Direct United States Cable ..	20	0 12 1/2
10	Eastern .....	10	0 9 1/2
10	East. Exten. Austr. and China ..	10	0 9 1/2
10	Great Northern .....	10	0 9 9 1/2
25	Indo-European .....	25	0 8 1/2
10	Mediterranean Extension .....	10	0 9 1/2
Stk.	Submarine .....	100	0 240 5/8
10	West India .....	10	0 1 1/2
20	Western and Brazilian .....	20	0 7 1/4
\$1000	West. Union Tnp.c. Mort. Bonds	\$1000	120 125

## MISCELLANEOUS

MISCELLANEOUS				
25	Australian Agricultural	21	10	73 76
10	Brighton Aquarium [L]	10	0	4 48
Stk.	Cent. of New Jersey Con. Mort.	100	0	109 112
25	City of London Real Property	12	0	3% 3%
5	Diamond Rock Boring	4	10	3% 6 1/2
16	Fore Street Warehouse [L]	14	0	16% 17
15	Foster, Porter, and Co. [L]	10	0	16% 17
17	Hudson's Bay Company	1	0	16% 17
74	Imperial Oil Ltd.	7	10	7% 7 1/2
Stk.	Leigh Val. Con. Mort., A. & p. c.	100	0	105 107
10	Milner's Safe [L]	10	0	8% 11
25	National Discount [L]	5	0	10% 11
Stk.	N. Cent. Rail. Mort. 6 per cent.	10	0	101 103 1/2
10	Pawson and Co. [L]	6	0	50 52 1/2
5	Peninsular and Oriental Steam	50	0	113 120
Stk.	Peninsular & Oriental S. S. Co.	100	0	113 120
Stk.	Do. Con. Sink Fund 6 p. c. 1905	100	0	114 118
Stk.	Scottish Australian Inv. Co.	100	0	185 195
Stk.	Ditto New Ordinary	50	0	95 105
Stk.	Ditto 6 per c. guar. pref.	100	0	127 130
Stk.	Ditto 5 per c. guar. pref.	100	0	107 109
12	Telegraph, Const. & Maint. [L]	12	5	34 34 3/4
15	Ditto 2nd Bonus, 3 per cent.	5	0	34 34 3/4
10	Waris S. S. Co. 6 p. c. 1905	100	0	32 33
Stk.	Union Pacific Land Gr. 1st Mt.	100	0	116 118
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